

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

**A COMPREHENSIVE STUDY OF FACTORS IMPACTING
THE FUTURE SIZE AND SCOPE OF MILITARY
GRADUATE MEDICAL EDUCATION**

By

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December, 1997

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AND SCOPE OF MILITARY GRADUATE MEDICAL EDUCATION**

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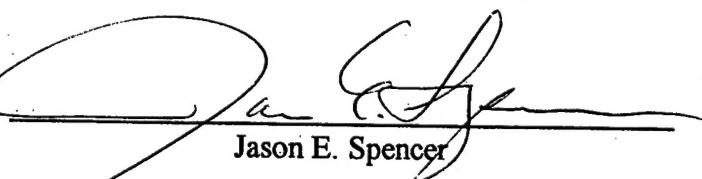
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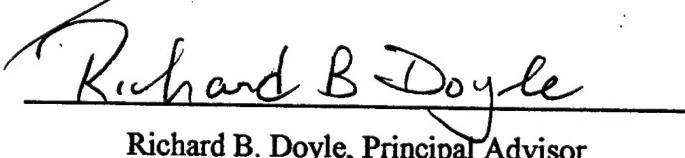
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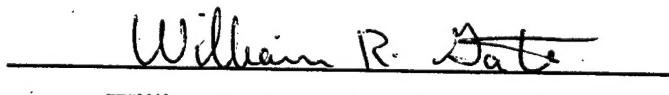
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ABSTRACT

Graduate medical education (GME) is the postgraduate medical education required for all medical school graduates pursuing licensure. Since World War II, the military medical services have undertaken full time inservice GME missions to ensure a supply of quality physicians and surgeons for both the military's wartime readiness and peacetime health benefit missions. However, determining the number of active duty physicians and surgeons, and the specialties which they practice, has been a complex and controversial issue within military medicine, particularly since the end of the Cold War.

This thesis examines the factors impacting the future size and scope of military GME. A comprehensive history of military GME is provided. Detailed events and issues impacting GME which surfaced following the Cold War are also discussed. The current Department of Defense GME policy and funding issues are examined, as well as the operational GME implementation model developed by the United States Navy.

This thesis found that GME has historically been a valuable tool for recruiting, training, and retaining quality physicians and surgeons. Post Cold War budget

constraints and readiness policies and private sector changes in GME are likely to force changes in military GME programs, decreasing both the number of doctors and specialties.

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I. INTRODUCTION

A. BACKGROUND

Medicine is one of the highest paid and most respected professions in America. It is conducted in a dynamic, complex, labor intensive, technology reliant, and, most importantly, expensive health care delivery system. This system provides essential health and medical services that are in high demand. This system relies on an educated, diverse group of professionals, including researchers, nurses, therapists, technicians, managers, administrators, analysts, and lawyers.

The health care industry is most dependent on the pivotal, critical members of the health care delivery team, the physicians and surgeons. These doctors' decisions determine how most health resources are used, including the care provided by other professionals, laboratory services, return visits, and hospital use. Doctors ultimately determine the availability, quality, and costs of health care services. Therefore, issues related to health care reform, increased access to health care services, health care cost containment, and quality improvement must consider the supply, distribution, and education of physicians and surgeons [Ref. 1].

A key distinguishing characteristic of health care is the education and experience required to become a doctor and practice medicine. Physician education and training usually takes 11 to 13 years beyond high school. Following undergraduate education and the Medical College Admissions Test, the first step in becoming a doctor and practicing medicine is completing four years of medical school. Competition to get into the nation's 126 allopathic and 17 osteopathic medical schools is extremely intense, and the number of annual applicants far exceeds the available slots. In 1996, approximately one third of the 50,000 applicants to allopathic medical schools were accepted. That same year 10,781 students applied for 2,200 slots in the nation's 17 osteopathic medical schools [Ref. 2].

Medical school is an intense four year experience. The first two years consist of didactic instruction and the last two years concentrate on clinical exposure to many different specialties, including internal medicine, pediatrics, obstetrics and gynecology, family practice, psychiatry, and general surgery [Ref. 3]. Medical school is also very expensive, with costs approaching \$200,000 for four years. This forces most graduating doctors to accumulate debts [Ref. 4].

Medicine is the only profession where graduation from professional school is insufficient for entry into active practice. All states require doctors to receive supervised clinical experience through graduate medical education (GME) prior to licensure and independent practice [Ref. 5].

GME is conducted in programs called residencies. Residency programs include three distinct training phases: internships, residencies, and fellowships. Each phase offers more specialized training than the previous phase. First year residents are referred to as interns, and the first year of residency or the transitional internship is referred to as postgraduate year one (PGY-1). Residents are GME trainees in postgraduate year two (PGY-2) or beyond who are training for certification in a particular medical or surgical specialty such as internal medicine. Fellows are residents who are training for certification in a medical or surgical subspecialty, such as internal medicine - cardiology. Appendix B shows an overview of residency positions and lengths of GME training.

The overwhelming majority (92 percent) of the nation's 15,000 annual medical school graduates apply for internships and residencies in the approximately 2,000 U. S. teaching hospitals through the National Residency Matching Program (NRMP). The NRMP is a computerized program. Prospective

residents rate and rank their preferences for residency programs, and residency programs rate and rank their priorities for particular medical students. The prospective residents and residency programs submit their preferences, and the NRMP computer program matches students and GME programs. The results are released annually in March. The residents and residency programs are bound by the NRMP match [Ref. 6].

GME programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME). Accreditation is a voluntary process for determining whether a GME program is in substantial compliance with established educational standards. Accreditation represents a professional judgment about the quality of the GME program. The ACGME performs the accreditation process through 24 Residency Review Committees (RRC) and a Transitional Year Review Committee (TYRC). The ACGME sets standards and policies for accredited GME programs; the RRCs and the TYRC perform on site reviews to ensure compliance with the established standards and policies [Ref. 7].

The American Board of Medical Specialties (ABMS) is the umbrella organization that coordinates 24 medical specialty boards. Each of these ABMS specialty boards evaluates candidates in its field who voluntarily appear for

examination. The boards certify as diplomates those who are qualified. One of the qualifications for board certification in any of the ABMS certified specialties is completing an ACGME accredited program [Ref. 8].

Board certified specialists are among the highest paid medical professionals in the nation. Figure 1.1 shows the annual average 1992 salaries for some specialties in the private sector health care industry [Ref. 9].

1992 AVERAGE ANNUAL SALARIES BY SPECIALTY

Specialty	Mean Physician Net Income
Surgery	\$233,800
Radiology	\$229,800
Obstetrics/Gynecology	\$221,800
Anesthesiology	\$221,100
Pathology	\$197,700
Internal Medicine	\$149,600
Psychiatry	\$127,600
Pediatrics	\$119,300
General/Family Practice	\$111,500

Figure 1.1

SOURCE: Jonas's Health Care Delivery
In the United States (Fifth Edition)

Health care delivery has experienced dramatic cost increases and is widely recognized as being over specialized. This is dramatically affecting the way physicians practice medicine. It has also shifted medical insurance coverage from liberal fee for service insurance to

stricter managed care options, particularly health maintenance organizations (HMO).

From 1990 to 1995, the percentage of U. S. physicians who worked for HMOs increased from 36 to 64 percent; 83 percent of doctors were in practices with at least one managed care contract [Ref. 10]. HMOs seek to contain medical costs by emphasizing primary care physicians (internal medicine, family practice, and pediatric specialties) rather than more specialized doctors. HMOs practice medicine in an outpatient rather than an inpatient setting, and emphasize preventative medicine and wellness. Primary care doctors are generally among the lowest paid specialists, but are in the highest demand by HMOs and the rest of the health care industry [Ref. 11].

In the private sector, GME is heavily subsidized by Medicare. In 1995, Medicare spent nearly \$7 billion to assist teaching hospitals in training residents [Ref. 12]. Through Medicare, the government recognized the additional costs that teaching hospitals incurred to train physicians. Medicare subsidizes teaching hospitals to train physicians.

However, Medicare must also respond to changes in the health care market place relative to GME; it has been slow to change. Until the recently passed Balanced Budget Act of 1997 (BBA), Medicare payments to teaching hospitals provided

incentives to train specialists in hospital settings rather than primary care physicians in outpatient settings [Ref. 13].

B. MILITARY GME

The Department of Defense (DOD) and the three military departments recognized the importance of maintaining a trained cadre of specialists who were able to deploy worldwide. They also recognized the difficulty of recruiting and retaining highly educated professionals into military occupations which pay substantially less than the private sector. Figure 1.2 compares the average annual salaries of an O-5 board certified physician with 8 years of service and a 4 year commitment with their civilian physician counterparts [Ref. 14].

CIVILIAN AND MILITARY SALARY COMPARISON

Specialty	Military	Civilian	Difference
Surgery	\$125,371	\$233,800	\$108,429
Radiology	\$128,371	\$229,800	\$101,429
Obstetrics/Gynecology	\$130,371	\$221,800	\$91,429
Anesthesiology	\$120,371	\$211,100	\$90,729
Pathology	\$112,371	\$197,700	\$85,329
Internal Medical	\$112,371	\$149,600	\$37,229
Psychiatry	\$109,371	\$127,600	\$18,229
Pediatrics	\$106,371	\$119,300	\$12,929
General/Family	\$111,371	\$111,500	\$129

Figure 1.2

SOURCE: NAVY TIMES (13 JANUARY 1997)

After cancelling the draft in 1972, the Uniformed Services University of Health Sciences (USUHS) was created to provide DOD a cadre of career medical officers; the Armed Forces Health Professions Scholarship Program (AFHPSP) was created to provide the majority of DOD's physicians who would not be career medical officers [Ref. 15].

However, DOD's principal tool in recruiting and maintaining a trained cadre of medical officers is military sponsored GME programs. The three services created and maintained GME programs in many specialties following World War II. These programs are accredited by the ACGME in the same manner as civilian programs.

DOD has maintained a firm financial commitment to the GME mission. In FY 1994, 3,364 doctors were training in military GME programs; an additional 1,672 physicians were being trained through civilian GME programs. The total estimated cost of GME in FY 1994 was \$186 million [Ref. 16]. By the time military physicians complete their residency, DOD has spent over \$500,000 per physician [Ref. 17].

Following the end of the Cold War, all DOD activities were scrutinized to justify their costs and functions under the drastically reduced wartime requirements. The military medical departments were included in these assessments. The military medical departments are also subject to the same pressures affecting the private sector health care industry; DOD is implementing some of the same cost containment policies that civilian employers look for in their health insurance plans [Ref. 18]. As a result, all military medical department functions, including GME, must be justified by either mission requirement, i.e. readiness, or cost-effectiveness.

DOD's primary readiness mission is the basis for its medical cadre. In the Navy, doctors in GME programs typically complete an internship year. Then they spend two years providing acute medical care to active duty Navy and Marine Corps personnel deployed throughout the fleet. This

is unique to the military as these non-board certified doctors serve in the fleet as general medical officers (GMO), underseas medical officers (UMO), or flight surgeons (FS). These doctors typically complete their residency programs following their utilization tours in the fleet; their counterparts in the civilian sector have continued on in their residency programs.

DOD also provides a secondary peacetime benefit mission to compensate active duty personnel and maintain the skills of its physicians and surgeons. This peacetime benefit provides free health care in MTFs to eligible non-active duty beneficiaries, such as active duty family members, retirees, retiree family members, and survivors. This care is provided on a space available basis.

Although the readiness and benefit missions require the usual mix of medical specialties, the secondary benefit mission uses many specialties which are not readiness essential. Some argue that these specialties should be directly provided on a pure cost/benefit basis; others contend that the GMOs, FSs, and UMOs will only undertake these readiness roles if they can anticipate completing residency programs in the specialties required for the benefit mission. This view holds that the readiness mission cannot exist apart from the benefit mission.

C. PROBLEM

Military GME is a costly system for training physicians and surgeons. It is considered to be very important inside the military medical profession. However, its current size and scope are difficult to defend in an era demanding increased efficiency in all aspects of military operations.

D. OBJECTIVES

This thesis will review the history of military GME and examine in detail contemporary issues and factors affecting its size and scope (number of doctors and specialty mix). Some of the factors are unique to DOD, others are unique to the civilian health care industry, but many factors are common to both DOD and the civilian sector. As controversial and politically sensitive as the GME issue is in the military, it cannot be adequately addressed without considering events and issues affecting GME in the civilian sector. This thesis will also examine a GME restructuring plan developed by the U. S. Navy Bureau of Medicine and Surgery (BUMED).

E. RESEARCH QUESTIONS

What are the policy, fiscal, and operational implications for military GME associated with the end of the Cold War and the subsequent reduction in the United States Armed Forces?

Why do the military services consider GME to be so important, particularly for physician recruitment and retention purposes, that each service undertakes an inservice GME mission?

What internal DOD factors, civilian sector developments, or issues common to both are changing GME policy and the organization of GME operations in the Military Health Services System (MHSS)?

What are the current policy directions for military GME and what operational models support this policy direction?

What is the funding mechanism for military GME under a capitated managed health care system?

What is the likely future size and scope of military GME?

F. SCOPE

This research examines the full time inservice GME programs conducted by the Navy Medical Department. Significant DOD policies affecting Navy GME, relevant

integration issues involving the Army and Air Force, and historical developments in the Army GME programs will be discussed.

This thesis assumes that events in the civilian health care sector will have significant impacts on DOD GME issues. The vast majority of GME is conducted outside the military, and military GME programs are accredited in the same manner as the civilian programs.

G. METHODOLOGY

Interviews were conducted with personnel from the Office of Assistant Secretary of Defense for Health Affairs (OASD(HA)), the Naval School of Health Sciences Directorate for Medical Corps Professional Programs, the Office of the Chief of Naval Operations (N-931C), the National Capital Military Medical Education Consortium (NCMMEC), the Associate Dean for GME at the USUHS, the Medical Historian at the USUHS, the Advisor to the Commander for GME of the David Grant Air Force Medical Center at Travis AFB, CA, and surgical personnel at the National Naval Medical Center (NNMC) at Bethesda, MD. Instructions and regulations governing GME in DOD and the three military medical departments were reviewed and analyzed. Periodical articles dealing with GME and contemporary civilian health care

issues were also reviewed and analyzed, as were relevant congressional testimony and press releases from the DOD, the Department of Health and Human Services (HHS), and the Health Care Financing Administration (HCFA) of HHS.

H. CHAPTER OUTLINE

Chapter II will provide an extensive history of events leading to the creation and maintenance of military GME programs prior to the end of the Cold War.

Chapter III will discuss events and issues relating to the maintenance of military GME programs since the end of the Cold War. The chapter will also describe events in the private sector affecting both civilian and military GME, such as the BBA and the proposed Consumer Bill of Rights.

Chapter IV outlines DOD policies, operational restructuring models, and funding provisions impacting military GME.

Chapter V will synthesize and analyze issues and concerns relative to the future size and scope of military GME.

II. HISTORICAL TRENDS AFFECTING GME: PRE-1989

A. INTRODUCTION

Military GME is a costly system of training physicians and surgeons. Unfortunately, GME's importance is not easily understood outside of the military medical profession, especially by individuals charged with scrutinizing budgets in an era demanding increased efficiency in all aspects of military operations. The importance of military GME and its implications in a post Cold War medical system can only be fully appreciated or understood by first considering the historical events and trends explaining why the services established a military GME mission. This chapter presents historical trends affecting GME prior to the end of the Cold War, with particular emphasis on the interval between World War II and the Korean Conflict.

B. EARLY MILITARY MEDICAL TRAINING PROGRAMS

The formal teaching of medical officers begins in the 18th century. John Warren's instruction to medical officers in anatomy and surgery achieved such great success that he was asked by the Harvard University trustees to start a medical school following the Revolutionary War. Today,

Harvard University Medical School is the top medical school in the country [Ref. 19].

The first authorized program for military GME was established in the early 19th century. The program was developed by Thomas Harris at the Philadelphia Naval Hospital and ran from 1823 to 1843. The Brooklyn Navy Yard also developed schools in the late 1890's to train doctors in military medicine, emphasizing bacteriology. The Army established a similar program in Washington, D.C.

C. "FEAST OR FAMINE"

The American people have proven to be extremely patriotic in times of war and national emergencies. In such circumstances, American citizens from all occupations, including physicians, surgeons, nurses, and other medical personnel, volunteer or are drafted to assist in the various campaigns. The federal budget and domestic economy shift to reflect wartime priorities. For the military, this time is known as feast; the military has the money, manpower, equipment, and technology to accomplish the specific mission.

The more troubling trend affecting military GME is the famine trend. The American public is reluctant to maintain wartime military scope and strength in terms of personnel,

money, and manpower following a major war or conflict. The first signs of peace or reduction in hostilities usually initiate discussions to cut back military strength [Ref. 20].

Following World War I, the military medical departments experienced this trend. H. W. Smith, a career Navy medical officer, observed, "Following demobilization, we were literally unable to secure candidates for appointment in the Medical Corps although the vital importance of 'fresh blood' was recognized and every effort was made to introduce desirable young men into the Navy." [Ref. 21]

This famine trend was even more evident following World War II. In December 1947, the Army Medical Department was authorized 3,000 Regular Army Medical Corps billets, but the actual personnel numbered 1,206 [Ref. 22]. Furthermore, special rules had to be implemented to retain physicians on active duty. During congressional hearings in 1947, General of the Army Dwight D. Eisenhower summarized this problem as "one of the hardest...we have got in the Army... we have fewer doctors today in the Army, in the Regular Service, including the ones who have recently accepted commissions, than we did when the war started." [Ref. 23] He further characterized this problem as requiring "more planning, more brains...than almost anything I can think of." [Ref. 24]

D. GENERAL PRACTICE TO SPECIALTY PRACTICE

Military doctors had traditionally practiced generalist medicine; providing medical care for all types of injuries, illnesses and conditions. Until the early part of the 20th century, most doctors completed medical school and went directly into medical practice, with no supervised training by qualified, experienced practitioners.

However, at the turn of the century, certain doctors in the military were specializing, meaning that these practitioners had specific skills or were in some way limiting their practice to such specialized areas as general surgery. With the release of the Flexner Report in 1910, one to two year internships were established. Trainees completing the internship would typically practice as generalists [Ref. 25]. By the beginning of World War I, fifteen states required an internship to receive medical licensure. In 1919, the Army and Navy met the published requirements for an American Medical Association (AMA) approved internship.

The internship process for general practitioners eventually led to the residency and fellowship programs for specialty training. The American College of Surgeons (ACS) required certification of practical experience, both with a mentor and in independent practice for a fellowship. In

1928, the AMA published standards for an approved residency program. In the 1930's, the Advisory Board of Medical Specialties was established and set inter-specialty standards for training; specifically, three years of post-internship training in an AMA approved residency program [Ref. 26].

In 1933, the Navy Surgeon General, RADM Rossiter, committed the Navy Medical Department to meeting the civilian Advisory Board of Medical Specialties GME standards [Ref. 27]. This furthered the precedent that civilian professional organizations would set the standards; military medicine would follow these standards. Therefore, military medicine, with its unique specialties and environment, could not exist independent of the civilian health care sector, particularly for quality of care and recruitment and retention reasons.

In 1938, the ACS developed rigorous standards of training in surgery. The Advisory Board of Medical Specialties began extending residency training, and many teaching hospitals began using a pyramid residency system, which meant fewer and fewer residents would proceed to the next residency stages. Despite the fact that the AMA believed few doctors would become specialists, due to the

intense training, research interests and progress in specialty medicine encouraged more physicians to specialize.

The military could not offer training in all specialties, but definitely had a need in some areas. Thus, the military had the incentive to provide specialty training to competitively recruit and possibly retain physicians and surgeons. In 1929, the Navy Medical Department established a postgraduate medical board to evaluate the need for certain specialties and to prioritize the programs. Their medical officers were trained in the civilian sector [Ref. 28]. The Navy's most immediate needs were specialists in aviation and submarine medicine, and the non-medical specialties including chemistry and sanitation.

Even though specialization was becoming more common during the Great Depression years, the military was still practicing generalist medicine for the most part. According to BG Sam F. Seeley, USA, "You wouldn't believe it, but in the thirties until I left Walter Reed in 1939, we of the Medical Corps of the Army were not specializing." [Ref. 29]

World War II was the single event which sold the military on the importance of specialists. As America's involvement in World War II became more inevitable, the military realized that some specialties were absolutely crucial. To be adequately prepared for war and staff

hospitals simultaneously, specialists in general surgery, preventive medicine, and general internal medicine were clearly required.

As America entered World War II, doctors entered the military in great numbers. Approximately 40 percent of the available doctors were serving in the military, which had only 8 percent of America's population [Ref 30].

Some civilian GME academics entered the Armed Forces serving in operational units or teaching GME specialties in the military hospitals. The accomplishments of these specialists caused the military to encourage specialization. In 1944, Surgeon General, RADM McIntire, formally introduced residency training in naval hospitals [Ref. 31].

E. RECRUITMENT AND RETENTION PROBLEMS

The key contemporary issue of physician recruitment and retention surfaced following World War I. In 1923, the number of available internship positions exceeded the number of medical graduates for the first time, giving the medical graduates numerous options to complete their required internship. After the war, it was increasingly difficult for the Army and the Navy to recruit physicians for the Medical Corps. Military medicine had many associated disadvantages, including separation from family and the

practice of generalist medicine; most doctors were inclined to specialize.

In 1925, the Navy began commissioning interns in civilian residencies in the Naval Reserve as Lieutenants (Junior Grade). These doctors incurred an obligation to serve in the active forces following completion of their internship, thus helping the Navy in its efforts to initially recruit physicians. However, retaining these physicians after their obligated service became a problem for the Navy and Army Medical departments; most doctors were resigning their commissions.

Formal specialization gained strength during the Great Depression. At the same time, physicians' and surgeons' incomes were falling. Therefore, recruiting and retaining medical officers became easy enough that the Army abandoned its internship training program in 1937 [Ref. 32].

World War II was long, extensive, and costly for the American people and the military. At its conclusion, the top priority of the American government was demobilization. This included the medical departments. These service members were anxious, like most civilians drafted into military service, to get back into civilian life, particularly back into medical practice.

The military medical departments had serious difficulty retaining quality medical officers. It was the "feast or famine" phenomenon revisited, but medical officers leaving the service had some insights to offer. These officers cited many disadvantages ranging from professional assignments, inequitable pay compared to the civilian sector, and poor living conditions [Ref 33].

However, the most cited reason for leaving the military services was professional. MG Norman Kirk, the Army Surgeon General, described this situation: "Much of the unwillingness of the young physician to enter military service is due to his belief that the Army denies to him...opportunities for professional advancement, postgraduate education, for clinical specialization, for certification by professional specialty boards, and for clinical research and self expression." [Ref. 34]

The Society of United States Medical Consultants in World War II agreed, noting that, "The concept of the Army Medical officer as a general practitioner, capable of doing medicine, surgery, and certain specialties, and trained in military medicine as well...is wholly against the trend of the times, and if the {Medical} Corps set this up as an objective it would be impossible to induce good men to make Army Medicine a career." [Ref. 35]

The AMA's military recruitment drive is a prime example of the apathy among civilian doctors. In 1948, the AMA sent letters to every physician under the age of 26 (7,610 letters), with particular wording to individuals who had incurred obligations during World War II, encouraging them to join the military for two years. A total of 33 physicians joined the military in response. [Ref. 36]

A major concern for the military medical departments was the quality of medical department officers who either remained on active duty or who wished to join the medical departments. For example, 210 nurses were polled in June 1946 about their interest in an Army career. Only 15 expressed interest; of those, 6 nurses had efficiency ratings that prevented them from serving as career Army nurses [Ref. 37]. Similar concerns existed for physicians and dentists.

F. WORLD WAR II ISSUES

The large influx of doctors during World War II had significant ramifications for GME. Despite the large number of doctors serving in the military, the military felt that additional military officers were needed to fight the two front war, particularly to turn the tide of the war in the Pacific.

To meet this immediate personnel need, the Army began training enlisted men in the Army Specialized Training Program (ASTP) [Ref 38]. The comparable Navy program was called the V-12 program. These programs, in part, provided a future supply of physicians, dentists, and surgeons to staff hospitals through their internships and residencies. Following their GME training, they would serve as Medical Corps officers in national emergencies. For qualified candidates, the services paid the medical school tuition, fees, and living expenses; the candidates incurred an obligation to serve in the military in times of emergency. When the V-12 and ASTP medical programs ended in June 1946, over 13,000 physicians were trained and had fixed three year obligations [Ref. 39]. At that time, the supply of physicians was so great that the obligated service was reduced to two years.

G. BETWEEN WORLD WAR II AND THE KOREAN CONFLICT

The most significant time in the history of military GME occurred during the interval between World War II and the Korean Conflict. The men who incurred obligations under the ASTP and V-12 programs were typically eager to serve during emergencies, but were reluctant to serve during peacetime [Ref. 40].

Something had to be done to recruit and retain quality medical department personnel. This became even more crucial as most of the medical officers would complete their obligated service in 1948. The military leaders could not offer better pay than the civilian sector, much less provide better living conditions. It was felt that training, particularly GME training leading to specialty certification, was inseparable from medical officer procurement [Ref. 41]. Given the problems the civilian residency programs experienced when military officers were removed to serve in World War II, the answer was clearly military GME.

The Navy began its residency programs in December 1945; by November 1946 there were over 200 approved residencies in naval hospitals in many diversified specialties. By September 1948, the Navy produced 157 board-certified specialists [Ref. 42].

The Army's residency programs were established in 1947. By the middle of 1948, 376 residents were in training in five Army teaching hospitals. In 1948, the Army also began commissioning residents in civilian hospitals [Ref. 43].

Establishing military GME residencies was absolutely essential for other retention reasons. There was a significant demand for civilian medical personnel, and there

was a shortage of residency training positions in the civilian sector. This gave the military a recruitment vehicle for physicians who wished to specialize. The military offered GME training billets and a stable population for practice; the trainees owed the military a year of obligated service for every year of training the military provided. Career military medical officers were also encouraged to obtain postgraduate education. GME gave first priority to training career medical officers who would eventually become the teachers in the military GME teaching hospitals.

What further solidified the case for inservice GME was the comparative performance of the military GME trained residents and specialists in the Korean Conflict. It became obvious that the civilian doctors were not properly trained in basic military functions, and generally performed poorly when they were mobilized for service [Ref. 44]. As the conflict stabilized, the military decided that all personnel from military and civilian residencies should receive some basic military training; the military GME residents would be mobilized before the civilian GME residents, for practical as well as political reasons.

Another incentive for doctors to join the military was less successful than the GME programs. The Army-Navy Public

Health Service Medical Officer Procurement Act (Public Law 365) was approved on 5 August 1947. Public Law 365 tried to reduce the gap in the civilian and military pay by offering medical officers an extra \$100 per month for switching from reserves to the regular Army and Navy [Ref. 45].

1950 was another year of famine. The military was under pressure to curtail some of the GME programs. The Army was forced to eliminate civilian residencies, cut military residencies by 245, and shrink the civilian and military internships [Ref 46].

On 25 June 1950, when the North Koreans crossed the 38th parallel, the Army had to mobilize all residents and interns, an inadequate number, with many having no formal military training. Due to the severe shortage of doctors at the beginning of the Korean Conflict, the Congress passed Public Law 779 on 9 September 1950, also known as the Doctor Draft [Ref. 47]. This action included young physicians who had not served during World War II and had paid for their own education. This again made a strong case for maintaining military GME programs.

The interval between World War II and the Korean Conflict featured many other legislative and executive matters which profoundly affected the military and the military medical departments. Prior to passage of the

National Security Act of 1947, congressional hearings centered on unifying the military services and their medical departments. The military medical departments were criticized for excessive costs, duplication of effort during World War II, and underutilizing doctors during the war [Ref. 48]. Among the chief supporters of unification was General of the Army, Dwight D. Eisenhower, and his Surgeon General, MG Norman Kirk.

The National Security Act was signed on 26 July 1947 and took effect on 18 September 47. Rather than unify the services, this act created the Secretary of Defense (SECDEF) and separate service secretaries for the Army, Navy, and the new Air Force. The first SECDEF was Mr. James Forrestal.

Forrestal's first significant action relating to the military medical departments occurred on 1 January 1948. He created the Committee on Medical and Hospital Services in the Armed Forces. The group became known as the Hawley Board, after its chair, MG Paul B. Hawley, USA (Ret). The group consisted of the two Surgeons General, MG Raymond W. Bliss, USA and RADM Clifford W. Swanson, MC, USN, as well as the new Air Force top medical officer MG Malcolm C. Grow, USAF (the Air Force Medical Service wasn't established until September 1949). RADM Joel T. Boone, MC, USN, served as the Executive Secretary for the board.

The Hawley Board was commissioned to study all questions of common interest to the three medical services. Their objective was to obtain maximum efficiency and economy in the short term by coordinating military hospital construction projects, efficiently utilizing military medical treatment facilities (MTF), coordinating medical training programs, centralizing services, etc [Ref. 49].

The Hawley Board was strongly influenced by its two principal members, MG Hawley and MG Bliss. MG Hawley had very strong beliefs regarding military medicine. He believed that the military medical establishment could be greatly reduced without interrupting service. He felt it was appropriate to unify the three services' medical departments, and that the services used hospitals to train too many specialists. He felt it was more appropriate to obtain personnel from the civilian sector during wartime as had been done in the past [Ref. 50].

MG Bliss disagreed with MG Hawley on the level and extent of unification versus coordination. MG Bliss's predecessor, MG Kirk, supported unifying the services, as did General of the Army Dwight D. Eisenhower. Eisenhower was now retired. MG Bliss viewed military medicine as completely different from civilian medicine and believed that the military needed more doctors per patient than the

civilian sector. He believed a ratio of 6 doctors per 1,000 troops was a proper ratio as opposed to the civilian ratio of 1 doctor per 1,000 patients [Ref. 51].

MG Hawley was disgusted with the committee. "It was," he said, "a waste of time and money. I say to you frankly that, in the committee which I headed was a colossal display of bad faith." [Ref. 52] MG Hawley never traveled with the group to visit MTFs and continued with his civilian practice. In January 1949, he resigned and MG Bliss took over as chair of the Hawley Board.

Under the helm of MG Bliss, the Hawley Board was parochial, minimizing civilian involvement in the process of setting policy for military medicine. The Hawley Board only proposed minor reforms, including joint centers for diagnosing special conditions, experiments in joint staffing, a permanent committee to report to SECDEF, downgrading some hospitals to clinics and closing others, providing care for dependents regardless of parent service, and having each service maintain its own headquarters [Ref. 53].

In 1948, another group examined military health issues. The President's Commission on Reorganization of the Executive Branch became known as the Hoover Commission, because former President Herbert Hoover headed the panel.

The Hoover Commission chartered two separate, but equally important, committees to evaluate military health care matters. The Task Force on National Security, known as the Eberstadt Committee, and the Task Force on Federal Medical Services, known as the Voorhees Committee [Ref. 54].

The Voorhees Committee accepted three separate military medical services. The committee wanted to transfer control over stateside hospitals from the military to a proposed National Board of Health. The committee also recommended a single medical supply system, single service responsibility for medical care in overseas areas, reductions in dependant care, curtailment of postgraduate training programs, and transferring GME training for Armed Forces specialists to non-military federal facilities [Ref. 55].

The Eberstadt Committee reached similar findings for military medicine. The committee concluded that service estimates for medical and dental needs were excessive and found military doctors unsatisfactory. The committee also concluded that the military's assistance to the Veterans' Administration (VA) hospitals and dependent care contributed to the shortage of military doctors. The committee also questioned whether the emphasis on specialty training and professionalism would lead to neglect in field service operations [Ref. 56].

Acting on recommendations from both committees, the Hoover Commission believed that the military medical departments should only provide field services. The commission also recommended that SECDEF establish a civilian committee to advise the SECDEF on health and medical matters [Ref. 57].

The military medical departments' response was predictable, given problems in recruiting and retaining doctors. The services obviously believed that no one would join the military to perform field services. MG Bliss characterized the Hoover Commission recommendations as events which would lead the military medical departments to be "a service of mediocrity." [Ref. 58]

On 9 November 1948, SECDEF acted on the Hoover Commission recommendation to appoint a civilian consulting body. He created the Armed Forces Medical Advisory Committee. This committee became known as the Cooper Committee, after its chairman Mr. Charles P. Cooper. It was primarily concerned with increasing efficiency and economy in the government by eliminating waste and duplication through centralization. The committee membership included MG Hawley, Dr. Michael DeBakey, and CAPT Paul Titus, USN (Ret). (Capt Titus had been particularly instrumental in persuading the Navy Surgeon General to begin GME programs in

Navy hospitals in 1944). The committee originally included the military Surgeons General [Ref. 59].

In 1949, the Joint Staff recommended that the Cooper committee study the "unification and coordination" of the military medical departments, including possibly developing a "single medical service." [Ref. 60] The Cooper Committee realized that it had no mechanism to enforce its recommendations. Therefore, its first major recommendation was to establish an office in the SECDEF organization to implement the committee recommendations. This office would supersede the need for a single medical service. In May 1949, the new SECDEF, Mr. Louis Johnson, established the Medical Services Division in his office. Furthermore, he disestablished the Hawley Board on 1 July 1949. This action was extremely significant. The Surgeons General were removed from the Cooper Committee earlier in the year, thus making the only SECDEF medical advisory board an entirely a civilian body [Ref. 61].

Dr. Raymond B. Allen was the first Director of the Medical Services Division. The director was delegated the authority by SECDEF to establish general policies and programs for the medical services of the three departments and to exercise general direction and control over personnel

and facilities. He also established a medical advisory council consisting of the Surgeons General.

In October 1949, Dr. Allen resigned and was succeeded by another Cooper Committee member, Dr. Richard Meiling. Dr. Meiling reorganized the division. The division became the Office of Medical Services; Dr. Meiling became Assistant Secretary of Defense for Medical Affairs [Ref. 62].

On 2 January 1951, the new SECDEF, George C. Marshall, combined the duties of the Cooper Committee and the Office of Medical Services by chartering the Armed Forces Medical Policy Council (AFMPC). This body was the sole coordinating entity for DOD health care and medical policy, and would serve as DOD's interface in health and medical matters with government agencies, civilian medical and allied health agencies, and professional organizations. The Surgeons General were also a part of this council; they had the authority to represent their departments in formulating health and medical policy at the DOD level.

In 1951, the President also created the Health and Resources Advisory Committee; a former Cooper Committee member, Dr. Howard Rusk, was appointed as the chairman. The Rusk Committee was primarily concerned with an equitable distribution of the nation's health resources, particularly

medical personnel. The Rusk Committee operated separately from the AFMPC, although they had similar interests.

The AFMPC became actively interested in the career aspects of military service for medical personnel: the problems of recruiting medical personnel, developing a uniform Reserve program, and developing a nucleus of trained medical personnel.

On 3 September 1953, Dr. Frank B. Berry, a retired Army Colonel, became the second Assistant Secretary of Defense (Health and Medical). On 1 January 1954, the AFMPC was rechartered; once again the Surgeons General were eliminated, along with the Surgeon General of the Public Health Service and the Medical Director of the VA. More significantly, Dr. Berry initiated what became the Armed Forces Medical Officer Commission and Residency Consideration Program. Under this plan, doctors who owed service under the Doctor Draft of 1950, 1951, 1952, or 1954 could apply for a deferment until they had completed their residency training. This allowed for continuously training doctors while providing the military qualified medical specialists [Ref. 63].

The AFMPC built a closer relationship between military and civilian medicine. Both parties developed a clearer

perspective on their mutual interests and responsibilities which broadened the spectrum of military medicine [Ref. 64].

H. PHYSICIAN RECRUITMENT ISSUES FOLLOWING KOREA

The next troubling issue affecting military GME concerned procuring doctors in the late 1960's and early 1970's. Military doctors had to serve in Vietnam and overseas and provide for a growing dependent care mission. In 1970, over 14,000 doctors were serving in the military; 66 percent were serving as draftees fulfilling selective service obligations or as "volunteers" fulfilling residency obligations. These doctors left the military when their obligations were complete. 38 percent of the remaining 34 percent left the military following their first tour of duty. Of these remaining doctors, 60 percent left after their second tour of duty; the next great exodus was at the 20-year mark. So after two tours of duty, the number of military physicians would fall to 12.6 percent of the number in 1970 [Ref. 65]. This was a critical problem as the draft ended in 1972.

The Uniformed Services Health Professions Revitalization Act of 1972 (Public Law 92-426) was enacted to deal with this Vietnam-era problem of physician procurement and retention. Some medical officers became

career military medical officers (studies had demonstrated that medical officers with twelve or more years in service would stay the full 20 years); and some do not. The 1972 law dealt with both types of physician procurement issues.

The law established the AFHPSP, tailored for individuals were not expected to be career military officers. The program paid medical school tuition and fees as well as a monthly stipend for civilian medical school students. Upon completing medical school, the trainees entered GME training at the O-3 paygrade, attended the Combat Casualty Care Course (C-4) for readiness training, and successfully completed the United States Medical Licensing Exam.

In return, the trainees owed an obligation equal to the number of years sponsored by the scholarship, but not less than two (not including time spent in GME training). Additionally, the scholarship students served on active duty for 45 days every year during medical school. At this time they attended basic training and performed clerkships in MTFs.

Scholarship students were classified as deferred or regular. Regular scholarship students underwent GME training at military teaching hospitals and had an average retention of 9.8 years following training. Deferred

scholarship students completed their GME training at a civilian institution and had an average retention of 5.3 years following GME training [Ref. 66].

The 1972 law also established the USUHS at Bethesda, Maryland. The USUHS medical school is called the F. Edward Hebert School of Medicine and is named after the Louisiana Representative who led the fight to establish the university. This university was intended to provide DOD with a group of career military physicians. These prospective doctors were commissioned and entered active duty at the O-1 paygrade. After completing medical school, they were guaranteed selection for a military GME program, did not participate in the NRMP, and owed a seven year active duty obligation, not including the time spent in GME training.

Physician procurement through the USUHS is the more expensive of the two options and has been the subject of constant scrutiny. However, given the 4 years of active duty required to finish USUHS during medical school, the 3 years in a typical residency program (not counting the years as a GMO, FS, or UMO), and the seven year obligation, it is not very surprising the that the retention rate for the USUHS graduate is 18.5 years [Ref. 67]. Therefore, it

definitely provides the career medical officer cadre for which it was intended.

Some similarities exist between AFHPSP and UHUHS students. Upon completion of the internship, most doctors become GMOs on ships or in field units, FSs with Marine and Navy squadrons or on carriers, or UMOs on submarine tenders. These operational tours fulfill a year of obligated service for every year served.

After completing two year tours, the doctors are encouraged to apply for specialty GME programs and are given priority in selection. The selected individuals complete GME training leading to specialty certification, and owe an obligation equal to the greater of the years of residency training received or the unexpired obligation from medical school. Individuals further selected for fellowships incur a year for year obligation in addition to any existing obligation [Ref. 68].

I. THE LATE 1980'S

The late 1980's were characterized by dramatically increasing costs in health care [Ref. 69]. The military departments were not exempt from this phenomenon. The dependent and retiree population grew rapidly. Specialization required a broad patient base, and the 600

ship Navy required maintaining a broad mix of specialists. GME was seen as the cornerstone behind this effort.

The most significant event for Navy GME in the late 1980s was the 1988 Blue Ribbon Panel (BRP) on Navy Medicine. The panel concluded that Navy Medicine must focus in-house capability to optimally use the MTF to control ever increasing health care costs. Most notably, the panel concluded that Navy Medicine must make GME its top priority, even at the expense of not meeting all operational and overseas requirements. This included establishing personnel policies to properly man GME teaching hospitals and developing compensation packages to attract and retain the best clinicians and teachers [Ref. 70].

In 1989, the Chief of Naval Personnel, VADM J. M. Boorda, increased internships for the first time in many years. He further increased full time outservice billets for residencies and fellowships [Ref. 71]. These outservice GME programs involve active duty doctors completing residencies or fellowships in undermanned specialities at civilian institutions. This is different than a deferred AFHPSP resident, because the deferred resident doesn't come on active duty until GME is completed. VADM Boorda also authorized the Medical Officer Retention Bonus for eligible officers in outservice or inservice GME training.

J. CHAPTER SUMMARY

Many historical trends affected GME prior to the end of the Cold War. The "feast or famine" trend indicates the extent to which the American public and doctors are willing to serve in wartime, but are not as willing during peacetime. The trend of shifting medical care delivery from general practice to specialty practice throughout the 20th century had many ramifications for GME and the practice of medicine in MTFs. Perhaps the greatest single event was the outstanding contributions of specialists and academics during World War II which put DOD on the road to specialty care through military GME training.

Recruitment and retention trends illustrate the difficulty of recruiting and retaining quality medical professionals, particularly following wartime. Military GME was used to help solve some of these problems. Physician procurement and retention proved to depend on the opportunity to become a board-certified specialist, and the military provided residencies and fellowships to accomplish that end.

The interval between World War II and the Korean Conflict largely shaped much of the present MHSS and GME. The Army-Navy Public Health Service Medical Officer Procurement Act of 1947 sought to close the military and

civilian pay gap. However, the most important incentives to retain doctors on active duty were the GME training programs.

The work of the Hawley Board showed the political, parochial nature of the military medical departments. The Hoover Commission's Eberstadt and Voorhees Committees clearly expressed the popular belief that military medicine was overstaffed, overspecialized, and was overtraining specialists in MTFs. Furthermore, these committees recommended that military medicine should be unified under one service and relegated to practicing field medicine. The military departments responded and cut back on training opportunities. Then Korean Conflict demonstrated that a ready, specialty trained medical cadre was essential to mobilize for war. Military GME training programs best serve this purpose.

The Cooper Committee instigated the AFMPC which formed the basis for today's OASD(HA). This civilian council became very aware of the similarities and differences between military and civilian medical practice. This was extremely beneficial for both sectors.

The Uniformed Services Public Health Professions Revitalization Act of 1972 formed the basis for 93 percent of today's medical officer procurement [Ref. 72]. The

AFHPSP provides most of the military's doctors; while the USUHS produces most of the career medical officers.

The drive for a 600 ship Navy in the early and late 1980's put GME clearly at the forefront of Navy Medicine. Personnel policies were created or enhanced to ensure GME received the top priority, even over operational commitments.

III. EVENTS LEADING TO CHANGES IN MILITARY GME

A. INTRODUCTION

Military medicine faced a physician famine again following the end of the Cold War. However, this was different from previous famines. All facets of military operations were under severe scrutiny as the threat of a global conflict with the Soviet Union disappeared. Consequently, much of the personnel and infrastructure, including MTFs, required to combat and deter the Soviet threat and support the active duty forces were no longer needed.

Many hard and politically sensitive decisions were made during four rounds of base closure. Most bases that closed also closed their MTFs, eliminating access to care for beneficiaries remaining in the area. The DOD medical establishment received intense scrutiny for not taking cuts in personnel and funding in proportion to the combat forces [Ref. 73]. This scrutiny came despite the fact that 35 percent of the MTFs open in 1987 were closed by 1997, with only a nine percent reduction in the DOD eligible beneficiary population [Ref. 74].

In the civilian sector, health care costs continued to rise. The HMO was also emerging as an insurance and health

care delivery system which seemed to contain these increasing costs.

Many events took place following the Cold War which were unique to DOD, unique to the civilian health care sector, and common to both, all of which had significant direct and indirect effects on military GME. This chapter focuses on these events.

B. PRIORITY SHIFT IN NAVY MEDICINE

The single most important event affecting military GME, particularly Navy GME, was a shift in priority. In late 1988, the BRP concluded that GME would receive the top priority in Navy Medicine, even over operational commitments [Ref. 75]. The panel reasoned that physicians would be in constant demand for a 600 ship Navy, and GME was the recruitment and retention vehicle to manage the demand. In late 1990, Operation Desert Shield resulted in some vacant Navy GME positions, but cuts in GME positions and programs were not planned [Ref. 76].

Following Operation Desert Storm, there were major uncertainties regarding the justification and allocation of Navy medical resources and its dual mission priorities [Ref. 77]. By 1993, Navy medical education and training was recognized as a support function providing the right number

of personnel with the right skill sets to support operational requirements [Ref. 78]. The readiness mission was no longer subordinate to the GME mission; GME training requirements had to be tied to readiness.

C. LEGISLATION, STUDIES, AND ADMINISTRATIVE ACTIONS

Section 711 of the Defense Authorization Act of 1991 had a major impact on medical personnel endstrength. This act specifically prohibited reducing military (and civilian) health care personnel in DOD below the number of such personnel serving on September 30, 1989. The law permitted an exception if DOD certified to Congress that the number of personnel to be reduced were in excess of current and projected needs, and that the reduction would not increase costs in the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS). DOD was also prohibited from reducing the number of Navy active duty medical officers, including nonphysicians, to below 12,510, unless DOD met the same certification exception [Ref. 79]. Such a law makes reducing the number of physicians an extremely difficult, creative task, particularly with increasing civilian health care sector costs.

A significant administrative action took place within DOD on October 1, 1991. Deputy Secretary of Defense Donald

Atwood signed a memorandum which clarified DOD medical functions under the Assistant Secretary of Defense (Health Affairs) (ASD(HA)). The key provision of this decision consolidated the medical department budgets and programming responsibilities for Operations & Maintenance (O&M) appropriations under the ASD(HA). However, this decision didn't transfer the Military Personnel (MILPERS) appropriation to OASD(HA). Hence, it did not give ASD(HA) total medical force management [Ref. 80]. Any DOD action regarding military personnel issues, including increasing or decreasing GME training billets, ultimately remains the services' decision.

In 1993, the Bottom-Up Review (BUR) set the future force structure for the Armed Forces. Military personnel and infrastructure would be restructured to fight two simultaneous major regional conflicts (MRC). This included plans for a 346 ship Navy, much smaller than the 600 ship Navy which drove pre-Cold War Navy GME requirements [Ref. 81].

TRICARE was introduced in 1993, under Section 731 of the National Defense Authorization Act of 1994 and Section 8025 of the DOD Appropriations Act of 1994. This DOD-sponsored health plan was designed to provide quality, access, and value for active duty personnel, family members,

and CHAMPUS eligible retirees. Specifically, the plan offered two more options to the traditional fee for service CHAMPUS program. The plan offered both an HMO and a preferred provider option (PPO) for CHAMPUS eligible beneficiaries. The PPO option gave beneficiaries discounts on copayments if they used providers in the PPO networks [Ref. 82].

The HMO option, TRICARE Prime, was the chief feature of the TRICARE program. This option encouraged active duty and CHAMPUS eligible members to enroll with MTF and civilian primary care managers (PCM). The PCMs serve as the first point of contact and make all referrals to specialists for their enrollees. This option was cheaper for family members, but it imposed the most restrictions on enrollees. This option was designed to contain rising health care costs, which was a primary motivation for the service chiefs' support [Ref. 83].

However, TRICARE Prime has several features which impact GME. Prior to the HMO option, patients could see specialists directly; under this option, the PCM refers the patient to specialists when they deem it appropriate. This usually results in non-primary care specialists receiving fewer and fewer patients. It also results in fewer and fewer patients available to train residents; however, the

patients who do receive specialty referrals can be better patients for GME training.

Secondly, the HMO option only applies to active duty and CHAMPUS eligible family members. This means that the one major beneficiary group not entitled to enroll in the HMO option is Medicare eligible retirees, family members, and survivors, who become ineligible for CHAMPUS at age 65 when they become eligible for Medicare. This has caused a major political backlash from retiree groups and members of Congress. It also potentially presents accreditation problems for GME training programs which require a broad spectrum of patients from all ages. Compounding this problem is space availability in MTFs for non-enrollees. MTF's capacity is first available to TRICARE PRIME enrollees; Medicare eligible beneficiaries are the last in priority of non-enrollees. With MTF budgets now allocated based upon enrollees, the prospects for MTF space available care for Medicare eligibles becomes more remote [Ref. 84].

The first major post Cold War study involving the appropriate size of medical personnel was the 733 Study. This study was directed by Section 733 of the National Defense Authorization Acts of 1992 and 1993. The study specifically sought to determine the size and composition of the medical system needed to support the post Cold War era

Armed Forces during war or lesser conflicts. It also addressed adjustments in the medical system to enhance the cost-effectiveness of peacetime medical benefits [Ref. 85].

The 733 Study concluded what many suspected; requirements for medical care had declined significantly from the Cold War requirements. Specifically, the study concluded that only 33 percent of active duty physicians in the FY 1999 program were needed to support the wartime mission of two simultaneous major regional conflicts (MRC); only 50 percent of active duty physicians were needed for the wartime requirement, training, rotation, and support [Ref. 86]. This obviously means that fewer doctors must be trained in GME programs. However, the study didn't specify the appropriate number and types of specialties to be trained.

The study also concluded that care provided in the MTFs was cheaper on average than care provided under CHAMPUS. However, if the CHAMPUS system were absorbed by the MTF system, the study concluded that the overall costs of medical care would rise. This overall rise in medical care costs would result from a rise in utilization by CHAMPUS eligible beneficiaries. The beneficiaries would gain greater access to the MTF; previously they did not use CHAMPUS or the MTF. This "ghost" population, as well as the

eligible beneficiaries who used CHAMPUS, would seek free MTF care available with increased access. They would use the MTF in higher proportions than either group used CHAMPUS. The net result of this scenario was that the MTF cost advantage would be more than offset by the increased utilization rates from CHAMPUS users and the "ghost" population [Ref. 87].

The second major study involving the size of medical personnel was issued by the Commission on Roles and Missions (CORM). The CORM recognized that the peacetime medical establishment was larger than needed to support wartime readiness requirements. The CORM supported increasing access to private sector medical care [Ref. 88]. The CORM suggested considering MTF user fees. The CORM offered three basic options for sizing the medical infrastructure: continue the status quo, cut the medical force by 50 percent, or cut the medical force by 75 percent [Ref. 89]. Each option also had a subset option of charging MTF user fees.

The CORM reiterated that operational readiness is the top medical priority. They recommended that DOD emphasize the importance of medical support to military operations and establish uniform procedures for sizing DOD operational needs [Ref. 90]. The results of the CORM were much the same

as the 733 Study: it recommended drastic cuts in medical personnel, meaning fewer personnel would be trained in GME programs. However, it again failed to estimate the appropriate mix of physicians needed in the MHSS.

The National Defense Authorization Act of 1996 also had a provision related to the size of the medical force structure. The provision was motivated by the OASD(HA) response to the CORM and the military medical departments' plans for wartime force structure developed in response to the 733 Study. Section 745 of that Act directed an evaluation of the reasonableness of the military medical departments' models used to develop each service's wartime force level. Three working groups were formed to assist in this study. The first group is concentrating on the required wartime medical force structure. The second group is examining the medical personnel needed as a sustainment and training base to support wartime and operational requirements. The third group is to analyzing the full cost savings of the TRICARE program and considering other options. One alternative is to offer the Federal Employees Health Benefits Plan as a fourth option in TRICARE [Ref. 91]. The results of this follow on study have not been released as of this writing.

Another study issued by the DOD Inspector General dealt with GME and readiness. This study concluded that medical combat support units may not be able to adequately support the active duty forces during wartime deployment. Furthermore, MTF commanders were not able to accurately determine whether staff physicians met medical readiness requirements, such as attending C-4 and being certified in Advanced Cardiac Life Support or Advanced Trauma Life Support. The study also found that DOD and the services had inadequate medical readiness guidance, GME programs lacked comparability in medical readiness curricula, DOD did not take full advantage of the readiness training opportunities available to supplement GME programs, and DOD didn't have an adequate system to record readiness training and monitor physician readiness [Ref. 92].

For the Navy, the report indicated that 58 percent of the full time inservice GME programs were defined as readiness essential [Ref. 93]. Figure 3.1 lists specialities and notes the specialties in which the Navy offers full time inservice GME programs, and the specialties which the Navy considers readiness essential [Ref. 94].

NAVY GME PROGRAMS (INSERVICE AND READINESS ESSENTIAL)

Specialty	GME Program	Readiness Essential
Aerospace Medicine	X	X
Anesthesiology	X	X
Aviation Medicine		X
Cardiology	X	
Cardio-thoracic Surgery		X
Colorectal Surgery		X
Critical Care	X	
Dermatology	X	X
Emergency Medicine	X	X
Endocrinology	X	
Family Practice	X	X
Gastroenterology	X	
General Surgery	X	X
Hematology/Oncology	X	
Infectious Disease	X	
Internal Medicine	X	X
Neurology	X	X
Neurosurgery	X	X
Obstetrics/Gynecology	X	X
Occupational Medicine		X
Ophthalmology	X	X
Orthopaedics	X	X
Orthopaedics-Hand Surgery	X	
Otolaryngology	X	X
Pathology	X	
Pediatrics	X	X
Preventive Medicine		X
Psychiatry	X	X
Pulmonary Medicine	X	
Radiology	X	X
Radiology-Imaging	X	
Transitional Internship	X	X
Urology	X	X

Figure 3.1

This study further noted that DOD may produce more physicians than required to support readiness. It also noted that DOD did not know which specialties were cost-effective compared to other sources of GME training. The

report suggested that DOD determine the number and types of physicians required to support readiness, and size GME programs to produce the necessary number of physicians. Such methodologies should also identify, by medical specialty and geographic region, those GME programs which could be provided cost effectively in the MHSS [Ref. 95].

In May 1997, the Quadrennial Defense Review (QDR) was released. The QDR intended to address all DOD functions, including health care [Ref. 96]. It assumed that the DOD budget would be stagnant for five years. In fact, the QDR didn't address health care issues. Secretary of Defense William Cohen may have reasoned that health care issues were too complicated to be considered within the QDR's time constraints. In addition, the National Defense Panel was expected to address health care issues later in 1997 [Ref. 97].

In November 1997, the Defense Reform Initiative (DRI) was released. The DRI's four basic goals were to eliminate excess infrastructure, to compete many in-house functions performed by DOD with the private sector, to consolidate organizations to eliminate redundancies, and to adopt many of the private sector's most effective management techniques in DOD [Ref. 98]. The DRI didn't address health care

specifically, but all of the goals of the DRI have obvious implications for the MHSS and GME.

D. EMERGING TRENDS IN DOD HEALTH CARE

Given the legislative events, administrative actions, and studies following the end of the Cold War, several trends emerged which had implications for the MHSS and GME. The first of these trends is a renewed emphasis on readiness. All medical personnel and infrastructure in DOD would first be evaluated in terms of their relevance for readiness.

The second trend was unification. Unification had been addressed following World War II and again surfaced following the Cold War. Many felt that a single Defense Health Agency should be created [Ref. 99]. This obviously didn't occur. However, transferring military medical O&M funding from the services to ASD(HA) accomplished some degree of unification, which impacted GME. For example, GME training in DOD is funded by O&M, but both the training billets that residents fill and the staff physicians who teach GME are funded by the service's MILPERS appropriation. This has the potential to create significant problems for GME if DOD and the services disagree on the number and specialty mix of GME trainees.

The third trend is infrastructure reduction via base closure. The QDR and DRI both called for additional rounds of base closure which would involve closing MTFs on affected bases and limiting access to care.

The fourth trend is privatization. DOD wants to use readiness requirements as its core competencies. TRICARE is an example where some of the peacetime health care provided by MTFs can be privatized. Programs which can't be accomplished cost effectively within DOD, including GME, are to be considered for privatization. As previously noted, DOD doesn't know which of its GME programs are cost effective.

Personnel cuts are the fifth trend. The 733 Study, the CORM report, and the QDR all concluded that personnel cuts were required. However, the 733 Study and the CORM report weren't specific on the types of medical specialties to cut.

A sixth trend is that recent major DOD studies and panels aimed at increased efficiency and economy are unwilling to address DOD health care issues with any degree of specificity.

The final trend, which cuts across all issues, is politics. For example, Section 711 of the National Defense Authorization Act of 1991 prohibited DOD from cutting medical personnel unless DOD could certify that these cuts

would not increase CHAMPUS costs. Given the nature of rising health care expenditures, it would be difficult to prove that CHAMPUS cost increases were or weren't related to medical personnel cuts in MTFs. CHAMPUS costs would probably rise anyway.

Another political issue, the TRICARE Prime option's exclusion of Medicare eligible retiree enrollment, has drawn congressional and public attention. This is extremely significant considering that military retirees are active voters and they now comprise 50 percent of the DOD eligible population [Ref. 100].

This exclusion has resulted in suits by retiree groups. They claim that DOD broke a solemn pledge of free health care for life [Ref. 101]. It also sparked interest in Medicare Subvention. This policy would allow Medicare eligible beneficiaries to enroll in TRICARE Prime. HCFA, which administers Medicare, would reimburse DOD for all costs provided to Medicare eligible beneficiaries above and beyond what DOD normally spends on this group. Unfortunately, DOD has no accurate account of how much it normally spends on this group of retirees [Ref. 102]. Nevertheless, Section 4015 of the BBA has authorized Medicare Subvention demonstration projects in DOD.

Recent quality of medical care issues have also surfaced, which could have further political implications. The *Dayton Daily News* ran stories on cases where military doctors were negligent in treating patients, were not licensed properly to practice medicine independently, held special licenses which allowed practice in the military but not in the state granting the medical license, or simply failed their licensing exam on numerous occasions [Ref. 103]. Although these reports have drawn much attention in the national media, it doesn't specifically highlight any doctor who was trained in a military GME program.

DOD was also accused of not properly referring physicians with privilege restrictions to the National Practitioners Data Bank. Furthermore, DOD has also been criticized for its lack of confidentiality regarding medical records, which are the property of DOD and therefore not confidential. DOD has drawn further criticism for the Feres Doctrine, a 1950 Supreme Court ruling which prohibited active duty and family members from suing military doctors for malpractice involving an active duty patient. Even when a dependent is the patient, a lawsuit can be filed against the federal government, but not against the doctor [Ref. 104].

These highly visible reports on quality of DOD medical care have cast serious doubts on DOD's overall ability to provide medical care. While GME is not singled out in these stories, it cannot be helpful for GME programs where accreditation is based mainly on quality.

E. OVERALL HEALTH CARE EXPENDITURES

As previously noted, health care expenditures have been rising. Costs, which rose dramatically during the late 1980's and early 1990's, increased more slowly in the mid-1990's. For example, the national expenditure growth rates for all federal and private health care expenditures in 1990 and 1991 were 10.5 and 11.4 percent, respectively. By 1994 and 1995, these growth rates were 6.4 and 5.5 percent, respectively [Ref. 105]. Figure 3.2 shows national health care expenditures from 1990 to 1995 [Ref. 106].

NATIONAL HEALTH CARE EXPENDITURES

Calendar Year	Health Care Expenditures
1995	\$988.5 Billion
1994	\$937.1 Billion
1993	\$884.2 Billion
1992	\$820.2 Billion
1991	\$751.8 Billion
1990	\$666.2 Billion

SOURCE: HCFA (www.hcfa.gov)

Figure 3.2

Also interesting is the difference in the health care spending growth rates between the public and private sector. In 1990, private and public sector health care expenditures grew at rates of 11.7 percent and 12.7, respectively; in 1995, the private and public sector health care expenditures grew at rates of 2.9 percent and 8.7 percent, respectively [Ref. 107]. Much of the decrease in health care expenditure growth rates reflects the effects of managed care plans. These plans emphasize cost containment and covered over half of all Americans in 1995 [Ref. 108].

F. SHIFTS IN HEALTH CARE DELIVERY

In the 1990's, private sector medicine has been characterized by two notable shifts in health care delivery: the shift from inpatient to outpatient care and the shift

from specialty to primary care services. Both have implications for GME training.

In the late 19th and early 20th century, medical and surgical care was increasingly delivered in inpatient settings, primarily to provide aseptic conditions. Inpatient care dominated health care delivery throughout most of the 20th century. [Ref. 109]. The shift toward outpatient care has occurred as a result of new technologies, such as diagnostic procedures. This makes services available in outpatient settings which were previously available only in an inpatient setting. Outpatient care eliminates the large overhead expenses of a hospital or medical center [Ref. 110].

The shift from specialty care to primary care services was noted by the Council on Graduate Medical Education (COGME) in 1992. The COGME was authorized in 1986 to advise the federal government and Congress on the distribution, supply, and use of physicians. In 1992, the COGME determined the following:

- the nation had too many specialists and too few generalists (primary care physicians)
- shortages existed in the specialties of general surgery, adult and child psychiatry, preventive medicine, and generalist physicians with geriatric training

- the nation's medical education system could be more responsive to public needs for more generalists, underrepresented minority physicians, and physicians for medically underserved inner city and rural areas [Ref. 111].

In November 1995, the Pew Health Professions Commission recommended that medical schools be reduced by 20 percent over the next decade. This commission also predicted that managed care would force physicians to work more efficiently, eventually closing more than half of the nation's hospitals [Ref. 112].

The current mix of physicians could have several ramifications. The lack of primary care providers can create access problems, particularly for those in inner city and rural areas. The excess of specialists will probably contribute to higher costs and unnecessary services. Specialists may also be forced to perform primary care medicine for which they aren't properly educated [Ref. 113].

G. MEDICARE GME

In 1983, Medicare recognized the importance of care in teaching hospitals. More importantly, Medicare realized that care in teaching hospitals is more costly to provide than in non-teaching hospitals. Thus Medicare subsidies for

teaching hospitals are calculated on two bases: direct (DME) and indirect medical education (IME) costs.

DME costs include salaries and benefits for interns and residents, supervisory teaching physician costs, and overhead associated with operating a residency program. These payments are made even if the residents and interns are trained in an outpatient setting, as long as the teaching hospital pays the interns' and residents' salaries. The Medicare GME costs attributed to the DME payments have grown from \$1.3 billion in 1990 to \$2.0 billion in 1995 [Ref. 114].

The largest portion of the Medicare GME costs is IME payments. IME recognizes the higher costs of treating patients in teaching hospitals. They are based on a ratio of interns and residents to beds. Therefore, the higher the intern and resident to bed ratio, the higher the IME payments. According to the present formula, a 10 percent increase in the resident and intern to bed ratio will cause a 7.7 percent increase in the IME payments. IME payments do not subsidize training in ambulatory settings outside the hospital. Medicare IME payments rose from \$2.9 billion in 1990 to \$5.1 billion in 1995 [Ref. 115].

The implications of this payment mechanism are clear. This mechanism provides financial incentives to train many

physicians in hospital, not outpatient, settings. This is completely out of step with the managed care reforms that slowed health care cost growth in the private sector.

One of HCFA's first initiatives to address the problem of training excess physicians was the New York GME demonstration project. This plan called for teaching hospitals in New York to eliminate 20 percent of their residency slots over a five year period. HCFA would provide \$400 million in transition payments over six years as a positive incentive [Ref. 116].

The recently passed BBA (Public Law 105-33) totally changes the incentive structure of Medicare GME payments. First, this law overhauled the IME payment system. Section 4621 gradually decreases the IME payment increase of 7.7 percent for each 10 percent increase in the intern and resident to bed ratio to 5.5 percent by 2001. It also places a hospital specific cap on both the intern and resident to bed ratio and the total number of intern and residency positions. Most importantly, IME payments now apply to GME training performed outside the hospital setting as long as the hospital paid the residents' salary.

Section 4623 also sets a hospital specific cap for interns and residents which affect the DME payments. Section 4626 provides that hospitals agreeing to voluntarily

reduce their residency positions by 20-25 percent over five years, while maintaining the level of primary care training, will be entitled to a certain level of hold-harmless payments over those five years. Together, these provisions provide incentives to train fewer specialties in hospitals while emphasizing primary care doctors in outpatient settings.

This Act is also increasing the incentive for teaching hospitals to merge and form GME consortia. Many prominent teaching hospitals are planning mergers. One example is Stanford University Medical Center and University of California at San Francisco Hospital, which are two of the top ten teaching hospitals in America [Ref. 117]. Mount Sinai Medical Medical Center and New York University Medical Center are also merging [Ref. 118].

H. THE GROWTH OF THE HMO

By any standard, HMOs have experienced tremendous growth in the American health care industry; this will have tremendous impacts on GME. In 1970, there were 30 health plans; in 1997 there were over 1,500 health plans with 82 percent being for profit [Ref. 119].

HMOs practice medicine by having primary care physicians serve as the principal health care source for the

plans' enrollees. Enrollees seek all care through their PCM; the PCM makes all referrals to specialists that the PCM deems appropriate. The PCM emphasizes preventive care and wellness to maintain health and contain costs.

The enrollee has an incentive to use the PCM for all health care needs because they incur lower copayments when using this service. Moreover, there are financial disincentives for seeking care without the PCM's authorization. Many plans will not cover this care, except for bona fide emergencies.

HMOs have succeeded in America primarily because they contain costs. In the mid 1980's, General Motors discovered than it was spending more money on health care than on steel for its cars [Ref. 120]. HMOs have been able to control health plan premium growth. Annual increases were as high as 18.6 percent in the mid 1980's; they were just 2.5 percent in 1996. For this reason, 77 percent of Americans insured through employee sponsored insurance programs plans have managed care plans [Ref. 121].

HMOs are now experiencing heavy competition in the growing managed care industry. Consolidations through mergers has not been as cost effective as the parties hoped. Competition has forced HMOs to cover some prescription drugs not previously provided, and to offer other incentives to

join health plans [Ref. 122]. One of the nation's highest rated HMOs, Kaiser Permanente, lost money for the first time since it was established in 1933 [Ref. 123]. All of these events increase health care costs, and falling HMO stock prices indicate declining stock market confidence in the HMOs' ability to control cost while maintaining a healthy profit margin [Ref. 124].

HMOs such as Kaiser Permanente are now calling for federal regulation to ensure greater standardization across all health plans [Ref. 125]. As a result, President Clinton's Consumer Bill of Rights was proposed in November of 1997. The plan seeks eight modest reforms targeted at HMOs. Three provisions are of particular importance for GME: the right for access to high quality health care providers, which could mean more visits to specialists; the right to emergency medical care in situations that a layperson would deem an emergency, which would increase the potential for unnecessary emergency room visits; and the right for patients to participate fully in all decisions related to their health care, which again could lead to inappropriate specialty visits [Ref. 126]. All of these provisions could drive up short term costs and the demand for specialty care; much of the additional demand may not be necessary.

IV. POLICY, FINANCIAL, AND OPERATIONAL IMPACTS OF GME

A. INTRODUCTION

Military GME programs historically help to both recruit physicians into the military and retain doctors after their initial obligated service. The programs have also provided a means to care for the most seriously ill patients in MTFs which offer a full spectrum of health care services; a broad patient base is necessary for training [Ref. 127]. Furthermore, the programs have enabled senior medical officers the opportunity to broaden their professional horizons. They have the opportunity to educate and train newly graduated doctors through GME [Ref. 128]. Senior medical officer teaching and oversight helps maintain the quality of physicians serving in the military [Ref. 129]. Clearly, GME programs have been successful in these regards.

GME programs, like all programs with civilian counterparts, have not escaped scrutiny in the post Cold War era. Changes in the civilian health care industry and DOD have raised questions within DOD regarding the size, scope, and importance of military GME programs. This chapter describes the current GME policy direction, DOD financing changes, and an operational model used by the Navy to rightsize its future GME needs.

B. POLICY DIRECTION

The current DOD policy direction for military GME is simple: GME programs and medical training will be Tri-Service, integrated, consolidated, and reflect wartime and day to day operational support requirements [Ref. 130].

The oversight body for GME and undergraduate medical education is the Flag Officer Executive Committee on Graduate Medical Education. This executive panel is chaired by the Deputy Assistant Secretary of Defense (Clinical Services) and is responsible to OASD(HA). Its principal duties include overseeing the ASD(HA) Strategic Plan for rightsizing GME programs in the MHSS and promoting and monitoring appropriate integration of military GME programs [Ref. 131].

The committee also oversees planning and execution of the annual Joint Service Graduate Medical Education Selection Board (JSGMESB) [Ref. 132]. The JSGMESB meets every December to select both medical school graduates to fill internship and residency positions as well as doctors to pursue fellowships. The selectees are notified in December, to ensure no conflict with the NRMP.

C. GME POLICIES AND SIGNIFICANT POLICY ISSUES

The OASD Strategic Plan for rightsizing GME programs has the following major principles:

- adjust the size of programs within accreditation constraints to recognize the decline in the required number of interns, residents, and fellows
- base the size and scope of GME programs on readiness needs and eliminate programs clearly not needed
- eliminate all duplicate residency programs in close geographic proximity other than primary care unless the patient population or the military service clearly justifies the need [Ref. 133].

A much stronger policy for GME rightsizing is the Medical Program Guidance for Fiscal Year 1998-2003. This policy directed the services to retain 25 to 30 percent of physicians with an experience level between 5 and 12 years beyond their initial specialty certification. Furthermore, the policy specified the following:

- the National Capital Area (Walter Reed Army Medical Center, National Naval Medical Center, and the Malcolm Grow Air Force Medical Center) and San Antonio (Wilford Hall Air Force Medical Center and Brook Army Medical Center) MTFs would integrate all remaining duplicate GME programs except for primary care specialties
- GME programs with no trainees for two consecutive years would be eliminated by 2001

- the ratio of GME trainees to total active duty physicians would be 26 percent
- GME programs would be readiness focussed
- primary care would be supported by all GME specialties [Ref. 134].

Significant accreditation issues exist for GME programs. The ACGME accredits GME programs in the United States and develops policy regarding physician manpower and training environments. First, the ACGME can specify the minimum and maximum numbers of GME trainees per class. For example, internal medicine's minimum number of residents per class is 4. Second, the ACGME can specify the resident to faculty ratio for an approved GME program. For example, the internal medicine specialty's minimum required full time faculty to resident ratio is 1 to 6 [Ref. 135].

Figure 4.1 shows the ACGME specified minimum residents per class and the minimum full time faculty to resident ratio for all Navy inservice GME programs [Ref. 136]. Where no minimum number of residents or faculty to student ratio is specified, NS is listed.

GME ACCREDITATION SPECIFIED MINIMUMS

PROGRAM	RESIDENTS PER CLASS	FACULTY TO RESIDENT RATIO
Aerospace Medicine	NS	NS
Anesthesiology	NS	NS
Anesthesiology - Pain Management	NS	1 to 2
Dermatology	NS	1 to 3
Emergency Medicine	6	1 to 3
Family Practice	4	1 to 6
Internal Medicine (IM)	4	1 to 6
IM - Cardiology	1	1 to 1.5
IM - Endocrinology	1	1 to 1.5
IM - Gastroenterology	1	1 to 1.5
IM - Hematology/Oncology	1	1 to 1.5
IM - Infectious Diseases	1	1 to 1.5
IM - Pulmonary Medicine/Critical Care	1	1 to 1
Neurology	2	NS
Neurosurgery	1	NS
Obstetrics and Gynecology	2	NS
Ophthalmology	2	1 to 3
Orthopaedics	NS	1 to 4
Orthopaedics - Hand Surgery	NS	NS
Otolaryngology	NS	NS
Pathology	2	NS
Pediatrics	4	NS
Pediatrics - Adolescent Medicine	NS	NS
Psychiatry	NS	NS
Radiology	2	NS
Radiology - Imaging	NS	NS
Surgery	NS	NS
Transitional Internship	NS	NS
Urology	NS	1 to 2

SOURCE: ACGME (www.acgme.org)

Figure 4.1

The ACGME can also specify the patient base that residents must see. For example, internal medicine residents must receive training and clinical experience in

geriatric and adolescent medicine. Similarly, family practice residents require a broad patient base.

The ACGME can also specify the setting in which training takes place. For example, internal medicine residents must receive at least 25 percent of their training in outpatient settings [Ref. 137].

The accreditation standards have also specified certain performance levels for residents taking certification exams. For example, orthopaedics programs seek for their residents to attain at least a 75 percent passage rate on the initial certification examination [Ref. 138].

An extremely significant accreditation issue for military GME involves internships. The transitional internship requires that at least 80 percent of interns completing the program must continue in a residency program; if not, the internship program risks losing accreditation [Ref. 139].

The key person in the GME training program is the program director. Every GME program has a single director, including integrated military programs [Ref. 140]. The program director is responsible for the quality of the GME training programs. The program director appoints all faculty and has the major input into residency selections.

The accreditation standards also note the importance of the program director. Programs can lose accreditation if there are frequent changes in the program director. Some specialties, like the transitional internship, require a minimum term of service for the program directors. Some programs, like obstetrics and gynecology, require the program director to have at least five years of post residency experience as a board certified obstetrician [Ref. 141]. All programs require the program director to be board certified in the specialty program which he or she directs.

D. POLICY SUMMARY

The overall policy direction provided by OASD(HA) and overseen by the Flag Officer GME Committee is specified in the OASD(HA) Strategic Plan for rightsizing GME. It is further clarified by the Medical Program Guidance for Fiscal Year 1998-2003.

The accreditation issues with which GME programs must deal have significant impacts for military GME. The standards specify not just minimum number of residents and faculty members, but also the care settings and the patient base with which residents must receive clinical experience. The broader the age groups and severity of illnesses required, the broader the required patient base. The

required patient base can range from infants to Medicare eligible retirees.

The transitional year internship requirement mandating that 80 percent of interns completing the program receive further residency training is extremely significant. Since GMOs, FSs, and UMOs typically receive only one year of training prior to operational assignments, PGY-2 residency programs in the military must offer residency positions to at least 80 percent of the GMOs, FSs, and UMOs.

E. FINANCING MILITARY GME

The MHSS is now financing its medical services via enrollment-based capitation. This financing mechanism began in Fiscal Year 1998 and bases MTFs' budgets on the number of TRICARE Prime beneficiaries enrolled in the MTF [Ref. 142]. This is completely different from any previous DOD financing mechanism. Its major weakness is that not all TRICARE Regions are operational, including the National Capital Area. Therefore, some MTFs have no enrollees.

OASD(HA) recognizes that military GME has a different mission than a normal hospital or clinic. Health care is more costly in a teaching hospital because its mission emphasizes quality physician education and training rather than cost effective medical care. Given the difficulty of

developing different capitation rates for different teaching hospitals, OASD(HA) is continuing to fund GME programs for the direct GME costs [Ref. 143].

However, enrollment-based capitation can indirectly influence GME. Depending on the size and diversity of the enrollee population, GME may not have enough patients to maintain educational opportunities. This jeopardizes accreditation. If the enrollee population is not broad enough, major programs like family practice and internal medicine may face accreditation issues.

Another possible financial implication deals with Medicare Subvention. Subvention requires HCFA to reimburse DOD and other federal health agencies for care provided to Medicare eligible beneficiaries. This could mean that military GME training programs could continue to see or expand its Medicare eligible patient base. However, given the sensitivity of the Medicare Trust Fund, and the fact that DOD does not really know the historical level of care it provided to Medicare eligible beneficiaries [Ref. 144], it is unlikely that military GME programs can currently benefit from Medicare Subvention.

F. NAVY GME SIZING MODEL

In 1994, the Navy developed the Total Health Care Support Readiness Requirements (THCSRR) model. This model responded to budgetary and legislative pressures to rightsize the Navy Medical Department [Ref. 145]. The THCSRR was developed as a single readiness requirement which would incorporate and build upon portions of the 733 Study. It includes two components, readiness essential specialties and specialties needed to sustain readiness essential specialties.

The Medical Operational Support Requirement (MOSR) is the first component of the THCSRR. It is the basis for the wartime and day to day operational readiness support requirements. The second component of the THCSRR, which was not included in the 733 report, identifies billets needed to maintain future readiness requirements [Ref 146]. When the sustainment component is combined with the MOSR, the result is the THCSRR.

The GME portion of the THCSRR is the Graduate Medical Education Infrastructure Sizing Model (GRISM). The GRISM is based upon the MOSR's manpower requirements. It directly links the appropriate number of GME training opportunities to the GMO, FS, and UMO operational billets. The ratio of

GME trainees to total Navy physicians must not exceed 25 percent.

The GRISM is a dynamic model that provides three GME training scenarios: training in three medical centers, training in two medical centers, and training in 2.5 medical centers. It recommends the 2.5 medical centers option for GME training and provides specialty breakdowns for the associated readiness requirements. The model, however, does not specify which medical centers will train which specialties [Ref. 147].

The policy setting body for the BUMED is the Medical Education Policy Council (MEPC). The MEPC is chaired by the Chief of the Navy Medical Corps. It evaluates, develops, and proposes medical corps professional education policy for review and approval by the Surgeon General of the Navy. The MEPC also reviews, evaluates, and advises on all joint service initiatives and on all proposals to establish, disestablish, or modify GME programs [Ref. 148].

In February 1997, the MEPC recommended that the Surgeon General restructure and reduce Navy GME programs [Ref. 149]. VADM Harold M. Koenig, the Navy Surgeon General, decided to implement some of the recommendations, but made other decisions based upon joint GME training considerations [Ref. 150].

Appendix C compares the current inservice internship positions by MTF with the MEPC recommendations and the Surgeon General's decision.

Appendix D compares the current inservice residency positions by MTF with the MEPC recommendations and the Surgeon General's decision.

Appendix E compares the current inservice fellowship positions by MTF with the MEPC recommendations and the Surgeon General's decision.

Appendix F compares the current total inservice GME programs by MTF and specialty with the MEPC recommendations and the Surgeon General's decisions.

Appendix G compares the current number of GME trainees by specialty with the GRISM's output, the MEPC recommendations, and the Surgeon General's decisions. It quantifies the impact of the Surgeon General's decisions.

G. ANALYSIS OF THE NAVY RESTRUCTURING PLANS

The GRISM is a Navy specific plan which addresses the size and scope of military GME positions based upon both the readiness requirements for GMOs, FSs, and UMOs and the accreditation requirements to maintain the minimum level of inservice GME programs. This model stays well within the 25 percent limit imposed by the THCSRR, and within the 26

percent limit imposed by OASD(HA). The GRISM, however, doesn't specify which medical centers will train which specialties.

The MEPC made recommendations regarding the size and scope of military GME. Specifically, the MEPC recommended which hospitals would receive the bulk of the cuts. The MEPC reasoned that GME training should be focused on the two major fleet medical centers: San Diego, California and Portsmouth, Virginia. The integrated programs at Bethesda, Maryland would absorb the majority of GME trainee cuts. The MEPC used readiness criteria to select the specialties it recommended retaining. It recommended retaining all primary care programs while eliminating most fellowships [Ref. 151].

The Surgeon General's decisions also considered joint service agreements with the Air Force and Army regarding concentrating GME training in the National Capital Area, San Antonio, Texas, San Diego, California, and Tacoma, Washington. These joint service training considerations dictated that Portsmouth, Virginia takes the bulk of the cuts. Many of the fellowship programs eliminated under the MEPC recommendations were maintained by the Surgeon General's decisions. The Surgeon General also recommended closing the family practice program at Bremerton, Washington; Madigan Army Medical Center in Tacoma,

Washington would be the center for that GME program [Ref. 152]. Both the MEPC and the Surgeon General plans maintained slightly fewer internships than recommended by the GRISM for GMOs, FSs, and UMOs.

As an epilogue to the these developments, Congress intervened. The National Defense Authorization Act of 1998 put the Surgeon General's plan on hold, pending a Comptroller General study. This study is due to Congress on 1 March 1998 [Ref. 153].

V. SUMMARY AND CONCLUSIONS

A. SUMMARY

Military GME programs provide quality physicians and surgeons for the military. More importantly, the military GME programs have helped retain quality doctors, including career medical officers, by both increasing opportunities to specialize and providing opportunities to teach GME trainees. Military GME programs have been subject to feast and famine trends and have expanded and contracted given the circumstances of the time. However, no single positive incentive has historically retained career medical officers like the GME programs.

Changes in the civilian health care sector have affected GME training. Many studies and professional bodies concluded that America has excess specialists and insufficient generalist physicians, particularly primary care physicians.

The single greatest factor causing changes in the civilian health care sector was the dramatic increases in health care costs. Cost increases spurred the growth of the HMOs, which contained costs through PCMs and preventive medicine. They deemphasized specialty care. This helped to drive up the demand for primary care specialties, including

pediatrics, family practice, and internal medicine; it drove down the demand for non-primary care specialties. The chief accomplishment of the HMO was to control dramatic cost increases.

Despite their cost efficiencies, HMOs have also been criticized for quality of care concerns, lack of services, and complexity of plan benefits and rules. Such problems have caused many HMOs and other interest groups to call for reform and regulation. President Clinton's Consumer Bill of Rights would be a modest step toward standardizing the services provided by HMOs; it would also increase health care costs. However, these effects cannot be quantified for some time.

Another significant factor affecting civilian market GME is the changes in GME subsidies introduced by the BBA. Prior to this law, GME subsidies provided financial incentives for teaching hospitals to train specialists vice primary care physicians, to train in hospital vice outpatient settings, and to train as many physicians as possible. The BBA eliminated incentives to train only in hospital settings and placed hospital specific caps on the number of residents trained. Again, the effects of these policy change cannot be quantified for some time. However,

they should reduce specialty training while maintaining primary care training.

Figure 5.1 summarizes the significant changes in civilian medicine affecting GME.

CIVILIAN HEALTH CARE SECTOR CHANGES CULMINATING IN THE 1990s

Factors	From	To
Environment	Specialty Demand	Cost Containment
Insurance	Fee for Service	Managed Care
Care Delivery	Specialty Care	Primary Care
Care Setting	Inpatient	Outpatient
GME Subsidies	Specialty Training	Primary Care Training
Trainee Numbers	Maximum Possible	Residency Caps
Trainee Setting	Inpatient	Inpatient/Outpatient
GME Hospitals	Stand Alone	Mergers, Consortia

Figure 5.1

Changes in the military following the Cold War also significantly impacted military medicine and GME. The important question was not whether GME was training and retaining quality physicians, but whether the size and scope of military GME were appropriate for the MHSS following the Cold War.

Figure 5.2 summarizes changes in the military which have affected military GME following the end of the Cold War.

MAJOR POST COLD WAR MILITARY CHANGES IMPACTING GME

Factors	From	To
Threat	Global Soviet	Two MRCs
Infrastructure	Buildup	Base Closure
Defense Budgets	\$300 Billion Plus	\$250 Billion
Naval Fleet	600 Ship Navy	346 Ship Navy

Figure 5.2

The major military factor affecting military GME was increasing the emphasis on readiness. Studies found that medical manpower needed for wartime and day to day operational readiness requirements in the post Cold War military were substantially smaller than the existing manpower. Studies also found that readiness essential specialties were not always sufficient to maintain readiness. For example, thoracic surgery and preventive medicine are readiness essential specialties for which the Navy has no inservice GME programs. Similarly, the readiness essential specialty of anesthesiology was targeted for cuts by both the MEPC and the Navy Surgeon General.

The TRICARE program further complicated GME training issues. This program was designed to contain rising health care costs by enrolling active duty and CHAMPUS eligible beneficiaries in TRICARE Prime. It also prioritized MTF care to favor Prime enrollees.

TRICARE affects GME training in three ways. First, TRICARE Prime requires training more primary care providers, as in the civilian sector. Second, the more enrollees in the teaching hospital, the larger the patient population available for GME training programs. Third, the TRICARE program is not open to Medicare eligible beneficiaries. This restricts some programs from maintaining a broad patient base.

The TRICARE program offers beneficiary choice, but economics is the main force driving this program. The TRICARE program was designed to initiate the health care cost containment experienced in civilian HMOs. It is the military's attempt to conduct health care operations in a more competitive, businesslike environment. However, TRICARE is not operational in all regions, and its ability to contain costs has been seriously questioned. Its effectiveness cannot be known for some time after full operation [Ref. 154]. Fully implementing TRICARE means more GME training in primary care specialties and less GME training in nonprimary care specialties.

The push to rightsize the MHSS medical personnel also comes from economic pressures. Training personnel in excess of requirements is not only expensive and wasteful, but clearly cannot be justified in the military. Although

military GME makes up a little more than one percent of the budget, it drives additional personnel and service requirements to support teaching hospitals. To a large extent, GME can be performed in the private sector. Thus, it has been considered for cuts like all programs with civilian equivalents. To defend military GME, the military medical departments contend that military GME better prepares doctors for service in the fleet.

The military has attempted to unify its medical departments by giving ASD(HA) control over the medical O&M budget. This gave the ASD(HA) significant influence over GME policy direction, particularly with respect to rightsizing and joint GME operations. However, the ASD(HA) doesn't control the medical MILPERS funds. Therefore, ASD(HA) doesn't directly control the personnel aspect of rightsizing efforts. All personnel cuts are ultimately decided by the individual service. This has limited the MHSS's ability to operate in a more businesslike manner in a competitive health care environment, such as to institute joint staffing of integrated GME programs.

Legislative actions have both provided the MHSS flexibility in operating more like its civilian counterparts and imposed limitations which civilian health care providers don't face. Section 711 of the National Defense

Authorization Act of 1991 restricted DOD's ability to downsize personnel and GME programs by placing a floor under the number of military doctors to be retained on active duty. However, legislative action which created the TRICARE program to introduce managed care and contain costs has allowed military medicine to offer benefits and options comparable to the civilian sector.

Legislative actions have addressed controversial topics requiring drastic changes in health care delivery. For example, Section 745 of the National Defense Authorization Act of 1996 required updating the 733 Study. This addressed sustainment issues and other options not covered by the original study. However, legislation like Section 748 of the National Defense Authorization Act of 1998 appears to suspend an approved GME restructuring plan. The suspended restructuring plan considered every significant GME issue; it simultaneously provided information and strategies for making tough decisions on the future size and scope of Navy GME.

Accreditation standards play an important role in GME policy. Military programs must be accredited by the ACGME, the same body that accredits civilian programs. This means that military GME programs must be comparable in quality and meet the same guidelines as civilian programs. Such

requirements specify minimum numbers of residents, establish resident to faculty ratios, and require a broad patient base in some specialties from the young to the very old.

One significant difference between the military and civilian GME programs involves funding. Enrollment-based capitation is DOD's method for allocating budgets to MTFs. However, the GME portion of this equation is exempt from capitation financing because care in a teaching hospital is generally more expensive than in a non-teaching hospital. GME funding is paid directly to the teaching hospital's parent service. However, GME funding may be indirectly affected by a teaching hospital's ability to enrollee TRICARE Prime beneficiaries. Without sufficient enrollees, GME programs must depend on referrals from the civilian Prime PCMs and other military hospitals. The inability to maintain an appropriate number and diversity of patients will jeopardize a program's accreditation status.

Figure 5.3 summarizes the post Cold War changes in the military affecting military GME.

POST COLD WAR CHANGES IN THE MHSS AFFECTING GME

Factors	From	To
O&M Budgets	Service Level Control	DOD Level Control
MTF Budgeting	Production Based	Enrollment Based
Top Priority	GME Training	Readiness
Care Coordination	Service Specific	Regional Lead Agent
MTF Utilization	Optimize	Privitize
MTF Access Priority	A/D Family Members	Prime Enrollees
Dependent Care	MTF/CHAMPUS	MTF/TRICARE Options
Care Setting	Inpatient	Outpatient
GME Hospitals	Service Specific	Integrated
GME Training Offered	Numerous Specialties	Primary Care, Readiness
GME Training Settings	Inpatient	Inpatient/Outpatient

Figure 5.3

B. CONCLUSIONS

The MHSS has a primary readiness and a secondary benefit mission. Both missions are supported by GME training. GME training has provided a quality corps of military physicians and surgeons. It has enhanced DOD's ability to retain these officers in military service, despite the disparity between military pay and benefits and those offered by the civilian sector. From this point of view, nothing is wrong with GME. It does provide an effective means of training and retaining quality physicians. However, it does not currently have the proper size and scope for the post Cold War military.

Restructuring plans, such as the GRISM, the MEPC recommendations, and the Navy Surgeon General's

restructuring decisions represent, attempts to align the Navy GME training billets with the post Cold War realities of jointness, smaller programs, integrated programs in close geographic proximity, and programs emphasizing readiness and primary care specialties while simultaneously maintaining readiness requirements. As structured, these plans seem to realistically picture the future size and scope of military GME.

There is some interest, within DOD and Congress, in further reducing GME programs. GME would focus only on readiness specialties, while further prioritizing the benefit mission. While this seems economically feasible, many of the readiness specialties are primary care specialties also. Many specialties require a broad spectrum of patients, not just a largely healthy active duty population, and a broad range of services. For physicians to remain in current practice, they must also have a sufficient volume of patients. GME training programs also must have diverse patients for training purposes.

Practicing only on active duty patients, who tend to be extremely healthy, may be good business for HMOs, but it is insufficient to maintain physician practice much less GME training programs. Since the military must train physicians with a broad patient base and in sufficient numbers to meet

GME accreditation standards, particularly in readiness required primary care specialties, it is not unreasonable for the military to provide a portion of the beneficiary mission.

Some parties assert that civilian GME programs can provide the same, if not better, training opportunities for military physicians. While that may be true, civilian GME trained doctors have the lowest retention rates in military medicine. In addition, military medicine suffered when it pulled doctors out of civilian hospitals and into the Korean War. This disrupted civilian GME programs. Ultimately, the focus of military medicine is to preserve the fighting strength in wartime and safeguard health in peacetime. If retaining quality physicians and maintaining skills are important for wartime deployments and situations, some form of military GME is essential.

Accomplishing GME training and maintaining the skills required for the readiness mission in civilian hospitals, while simultaneously retaining quality physicians in the military without full time inservice GME programs, will require DOD to creatively craft physician incentive plans. This is something DOD could not accomplish prior to the full time inservice GME programs. It is also something for which

which DOD does not have the congressional authority and required flexibility.

Therefore, GME programs should be maintained in the immediate future. This also requires maintaining some elements of the benefit mission. However, these smaller, joint, primary care, and readiness focussed programs must also respond to changes in the military and the civilian health care environment.

C. OPPORTUNITIES FOR FURTHER RESEARCH

The author noted three areas germane to GME and military medicine which provide research opportunities. The first deals with managed care techniques and principals taught in the civilian medical schools and GME programs. This might compare the managed care principles taught in civilian medical schools and GME programs to their counterparts in USUHS and the military GME programs. It may also examine military and civilian GME trainees' and physicians' viewpoints regarding managed care education.

Another area of potential research deals with physician retention which is commonly associated with GME. GME has proven to retain quality physicians in the military long after they complete their obligated service. However, alternative approaches to increase this retention should be

examined, given the dynamic health care environment. For example, DOD is considering using current AFHPSP funding to pay off medical student loans for board certified specialists who were educated in civilian medical schools and GME programs. In exchange, these doctors would join the military [Ref. 155]. This directly bypasses the military GME system. It breaks with the past because the military wouldn't train these physicians.

Another potential area for research is the impact of removing the Feres Doctrine protection for military surgeons. Because military physicians cannot be sued under the Feres Doctrine, they don't maintain malpractice insurance. This is a major benefit, as this insurance is extremely costly. A study might examine physicians' viewpoints and the beneficiaries' perception of how quality of care might change after removing the Feres Doctrine protection.

APPENDIX A

LIST OF ACRONYMS

ABMS - American Board of Medical Specialties

ACGME - Accreditation Council for Graduate Medical Education

ACS - American College of Surgeons

AFHPSP - Armed Forces Health Professions Scholarship Program

AFMPC - Armed Forces Medical Policy Council

AMA - American Medical Association

ASD(HA) - Assistant Secretary of Defense (Health Affairs)

ASTP - Army Specialized Training Program

BBA - Balanced Budget Act of 1997

BRP - Blue Ribbon Panel on Navy Medicine

BUMED - U. S. Navy Bureau of Medicine and Surgery

BUR - Bottom-Up Review

C-4 - Combat Casualty Care Course

CHAMPUS - Civilian Health and Medical Program for the
Uniformed Services

COGME - Council on Graduate Medical Education

CORM - Commission on Roles and Missions

DME - Direct Medical Education Costs of Medicare

DOD - Department of Defense

DRI - Defense Reform Initiative

FS - Flight Surgeon

GME - Graduate Medical Education

GMO - General Medical Officer

GRISM - Graduate Medical Education Infrastructure Sizing Model

HCFA - Health Care Financing Administration

HHS - Department of Health and Human Services

HMO - Health Maintenance Organization

IME - Indirect Medical Education Costs of Medicare

JSGMESP - Joint Service Graduate Medical Education Selection Board

MEPC - U. S. Navy Medical Education Policy Council

MHSS - Military Health Services System

MILPERS - Military Personnel Appropriation

MOSR - Medical Operational Support Requirement

MRC - Major Regional Conflict

MTF - Medical Treatment Facility

NCMMEC - National Capital Military Medical Education Consortium

NH - Naval Hospital

NMC - Naval Medical Center

NNMC - National Naval Medical Center

NRMP - National Residency Matching Program

OASD(HA) - Office of the Assistant Secretary of Defense (Health Affairs)

O&M - Operations and Maintenance Appropriation

PCM - Primary Care Manager

PGY-1 - Postgraduate Year One (Internship Year)

PGY-2 - Postgraduate Year Two (Residency Years),
i.e. PGY-3, PGY-4, etc.

PPO - Preferred Provider Organization

QDR - Quadrennial Defense Review

RRC - Residency Review Committee

SECDEF - Secretary of Defense

THCSRR - Total Health Care Support Readiness Requirements

TYRC - Transitional Year Review Committee

UMO - Underseas Medical Officer

USUHS - Uniformed Services University of Health Sciences

VA - Veterans' Administration

APPENDIX B

TYPICAL PATTERNS OF RESIDENCY TRAINING, BY SPECIALTY*

Year of Graduate Medical Education

1	2	3	4	5	6 to 7									
Family Practice														
General Pediatrics		Subspecialties of Pediatrics												
General Internal Medicine (IM)		Subspecialties of IM												
IM	Dermatology													
IM	Neurology													
Psychiatry														
Obstetrics and Gynecology														
General Surgery (GS)		Plastic/Colon/Thoracic Surgery												
General Surgery		Neurosurgery												
GS	Orthopaedic Surgery													
GS	Otolaryngology													
GS	Urology													
General Surgery														
Pathology														
Transitional YR	Anesthesiology													
Transitional YR	Ophthalmology													
Transitional YR	Physical Medicine													
Transitional YR	Radiology													

*Source National Residency Matching Program Directory (Evanston, Ill; NRMP, 1993)
 AMA Directory of Graduate Medical Education Programs
 (Chicago: AMA, various years)

APPENDIX C

NAVY INTERNSHIPS (PRESENT AND PROPOSED)

1998 U. S. Navy Full Time Inservice Internship Programs and Positions

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Family Practice				6	12	13	10		41
Internal Medicine	21	19	20						60
OB/GYN	4	5	6						15
Pediatrics	5	8	8						21
Psychiatry	3	4	4						11
Surgery	13	15	22						50
Transitional	12	15	22						49
Total	58	66	82	6	12	13	10		247

1997 Medical Education Policy Council Internship Recommendations

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Family Practice				6	12	13	10		41
Internal Medicine	21	19	20						60
OB/GYN		5	6						11
Pediatrics		8	8						16
Psychiatry		4	4						8
Surgery	13	15	22						50
Transitional	12	15	22						49
Total	46	66	82	6	12	13	10		235

1997 Navy Surgeon General Internship Decisions

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Family Practice					12	13	10		35
Internal Medicine	21	19	20						60
OB/GYN	4		6						10
Pediatrics	5		8						13
Psychiatry	3		4						7
Surgery	13	15	22						50
Transitional	12	15	22						49
Total	58	49	82	0	12	13	10		224

APPENDIX D
NAVY RESIDENCIES (PRESENT AND PROPOSED)

Total U. S. Navy Full Time Inservice Residency Programs

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonville FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy	Program Length In Years
Aerospace Medicine									15	15 3
Anesthesiology	18	12	18						48	3
Dermatology	21		9						30	3
Emergency Medicine		24	24						48	3
Family Practice				12	24	26	20		82	2
Internal Medicine	14	20	24						58	2
Neurology	15								15	3
Neurosurgery	6								6	6
OB/GYN	12	18	15						45	3
Ophthalmology	9		8						17	3
Orthopaedics	12	12	20						44	4
Otolaryngology	10	10	8						28	5
Pathology	8	8	8						24	4
Pediatrics	20	12	12						44	2
Psychiatry	9	12	12						33	3
Radiology	8		24						32	4
Surgery	12	8	16						36	4
Surgery - Research	1	1	1						3	1
Urology	4	4							8	4
Urology			5						5	5
Total	179	141	204	12	24	26	20	15	621	

1997 Medical Education Policy Council Residency Recommendations

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonville FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy	Program Length In Years
Aerospace Medicine									24	3
Anesthesiology		12	18						30	3
Dermatology			9						9	3
Emergency Medicine		24	24						48	3
Family Practice				12	24	26	20		82	2
Internal Medicine	14	20	24						58	2
Neurology									0	3
Neurosurgery									0	6
OB/GYN		18	15						33	3
Ophthalmology	9		8						17	3
Orthopaedics	12	12	20						44	4
Otolaryngology		10	8						18	5
Pathology		8	8						16	4
Pediatrics		12	12						24	2
Psychiatry		12	12						24	3
Radiology			24						24	4
Surgery	12	8	16						36	4
Surgery - Research	1	1	1						3	1
Urology	4								4	4
Urology			5						5	5
Total	52	137	204	12	24	26	20	24	499	

1997 Navy Surgeon General Residency Decisions

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy	Program Length In Years
Aerospace Medicine								33	33	3
Anesthesiology	12		18						30	3
Dermatology	6		9						15	3
Emergency Medicine		24	24						48	3
Family Practice					24	26	20		70	2
Internal Medicine	14	18	22						54	2
Neurology	6								6	3
Neurosurgery	6								6	6
OB/GYN	12		15						27	3
Ophthalmology			9						9	3
Orthopaedics	12	12	20						44	4
Otolaryngology	10		10						20	5
Pathology	8		8						16	4
Pediatrics	8		12						20	2
Psychiatry	9		12						21	3
Radiology	8		24						32	4
Surgery	12	8	16						36	4
Surgery - Research									0	1
Urology	5								5	4
Urology			10						10	5
Total	128	62	209	0	24	26	20	33	502	

APPENDIX E

NAVY FELLOWSHIPS (PRESENT AND PROPOSED)

Total U. S. Navy Full Time Inservice Fellowship Programs and Positions

Program - Subspecialty	Program Length in Years	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	Total Navy
Anesthesia - Pain Management	1		1		1
Internal Medicine - Cardiology	3	6		6	12
Internal Medicine - Endocrinology	2	2			2
Internal Medicine - Gastroenterology	3	3		3	6
Internal Medicine - Hematology/Oncology	3	3			3
Internal Medicine - Infectious Diseases	2	4		4	8
Internal Medicine - Pulmonary Medicine/Critical Care	3	6		6	12
Orthopedics - Hand Surgery	1			1	1
Pediatrics - Adolescent Medicine	1			1	1
Radiology - Imaging	1			1	1
Total		24	1	22	47

1997 Medical Education Policy Council Fellowship Recommendations

Program - Subspecialty	Program Length in Years	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	Total Navy
Anesthesia - Pain Management	1		1		1
Internal Medicine - Cardiology	3			6	6
Internal Medicine - Endocrinology	2				0
Internal Medicine - Gastroenterology	3				0
Internal Medicine - Hematology/Oncology	3				0
Internal Medicine - Infectious Diseases	2			4	4
Internal Medicine - Pulmonary Medicine/Critical Care	3			6	6
Orthopedics - Hand Surgery	1			1	1
Pediatrics - Adolescent Medicine	1				0
Radiology - Imaging	1				0
Total		0	1	17	18

1997 Navy Surgeon General Fellowship Decisions

Program - Subspecialty	Program Length in Years	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	Total Navy
Anesthesia - Pain Management	1				0
Internal Medicine - Cardiology	3	6		6	12
Internal Medicine - Endocrinology	2	2			2
Internal Medicine - Gastroenterology	3	3			3
Internal Medicine - Hematology/Oncology	3	3			3
Internal Medicine - Infectious Diseases	2	4		4	8
Internal Medicine - Pulmonary Medicine/Critical Care	3	6		6	12
Orthopedics - Hand Surgery	1			1	1
Pediatrics - Adolescent Medicine	1				0
Radiology - Imaging	1				0
Total		24	0	17	41

APPENDIX F

TOTAL GME POSITIONS (PRESENT AND PROPOSED)

Total U. S. Navy Total Inservice Graduate Medical Education Programs

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Internships	58	66	82	6	12	13	10		247
Residencies	179	141	204	12	24	26	20	15	621
Fellowships	24	1	22						47
Total	261	208	308	18	36	39	30	15	915

Overall Medical Education Policy Council GME Recommendations

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Internships	46	66	82	6	12	13	10		235
Residencies	52	137	204	12	24	26	20	24	499
Fellowships	0	1	17						18
Total	98	204	303	18	36	39	30	24	752

Overall U. S. Navy Surgeon General GME Decisions

Program	NNMC Bethesda MD	NMC Portsmouth VA	NMC San Diego CA	NH Bremerton WA	NH Camp Pendleton CA	NH Jacksonv ille FL	NH Pensacola FL	NOMI Pensacola FL	Total Navy
Internships	58	49	82	0	12	13	10		224
Residencies	128	62	209	0	24	26	20	33	502
Fellowships	24	0	17						41
Total	210	111	308	0	36	39	30	33	767

APPENDIX G
COMPARISON OF NAVY GME RESTRUCTURING PLANS

Program	Present	*GRISM	*GRISM	MEPC	SG	**Change
Family Practice	41	43		41	35	-6
Internal Medicine	60	40		60	60	0
OB/GYN	15	15		11	10	-5
Pediatrics	21	21		16	13	-8
Psychiatry	11	12		8	7	-4
Surgery	50	12		50	50	0
Transitional	49	3	7	49	49	0
Total Interns	247	146	7	235	224	-23
Aerospace Medicine	15	4	10	24	33	18
Anesthesiology	48	20	48	30	30	-18
Dermatology	30	4	10	9	15	-15
Emergency Medicine	48	16	38	48	48	0
Family Practice	82		69	82	70	-12
Internal Medicine	58		64	58	54	-4
Neurology	15	3	7	6	9	-9
Neurosurgery	6	1	6	6	0	
OB/GYN	45		36	33	27	-18
Occupational Health		2	3			0
Ophthalmology	17	3	7	17	9	-8
Orthopaedics	44	12	38	44	44	0
Otolaryngology	28	5	20	18	20	-8
Pathology	24	4	13	16	16	-8
Pediatrics	44		34	24	20	-24
Preventive Medicine		3	5			0
Psychiatry	33		29	24	21	-12
Radiology	32	10	32	24	32	0
Surgery	39		38	39	36	-3
Urology	13	4	13	9	15	2
Total Residents	621	91	520	499	502	-119
Anesthesia-Pain Management	1			1		-1
Internal Medicine - Cardiology	12			6	12	0
Internal Medicine - Endocrinology	2				2	0
Internal Medicine - Gastroenterology	6				3	-3
Internal Medicine - Hematology/Oncology	3				3	0
Internal Medicine - Infectious Diseases	8			4	8	0
Internal Medicine - Pulmonary Medicine/Critical Care	12			6	12	0
Orthopaedics - Hand Surgery	1			1	1	0
Pediatrics - Adolescent Medicine	1					-1
Radiology - Imaging	1					-1
Total Fellowships	47			18	41	-6
Total Programs - GRISM		237	527			
Total Programs	915		764	752	767	-148

*Based on the 2.5 Medical Center Plan

**Surgeon General Decision - Present Capacity

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